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AMERICAN GAS ENGINEERING JOURNAL

FORMERLY

AMERICAN GAS LIGHT JOURNAL

VOL. CVIII., No. 17
WHOLE No. 3138

NEW YORK, SATURDAY, APRIL 27, 1918

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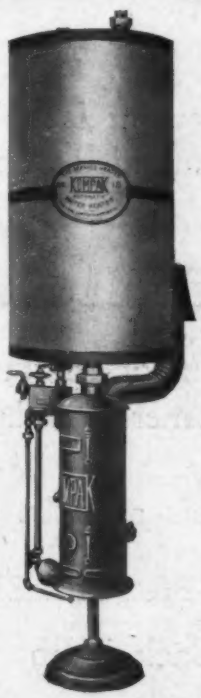

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2 WASH STANDS	4 WASH STANDS
KITCHEN	KITCHEN
and	and
LAUNDRY	LAUNDRY

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COMPANY

NEW BRUNSWICK
NEW JERSEY

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ADVERTISERS' INDEX, PAGE 20

The Gas Machinery Company

Cleveland, Ohio

COAL GAS PLANTS **WATER GAS PLANTS**

BY-PRODUCT MACHINERY

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Vol. CVIII, No. 17 NEW YORK, APRIL 27, 1918 Whole No. 3138

MOULDING "BUNNIES" FOR EASTER TRADE, USING GAS-FIRED GLUE POT

From the First Dyeing of Materials to the Final Crimping of Petals, Gas Is Especially Conspicuous in Artificial Flower Making

One of the Most Effective Appliances in Use Is the Great Melting Pot for Wax—Gas-Heated Petal Moulding Presses – Glue Troughs into Which Cherries Are Dipped

By ROBERT E. LIVINGSTON

Perhaps our unusual devotion to real war gardens has had its influence on artificial flower making. Certain it is that this delightful business, which fills factories with a multitude of colors (and with rush orders for the finished products) is producing more varieties of decorations than ever before. The array of artificial flowers, fruits, vegetables and nuts that are found in such an establishment are often so true in color and form as to deceive the eye of the casual visitor. A man sitting at a table working with silks and dyes, for instance, has a vase of real La France roses by him from which he is getting his color and form of petals, and on the table lie silken roses completed. For a moment florists' and manufacturers' products are indistinguishable, and only the practiced eye could know that the silken roses haven't fallen from the vase. Fruits of all types, from gooseberries to strawberries and raspberries, are all on exhibition in work and stock rooms. Luscious cherries hang row on row in a profusion that makes one long for a real orchard, after the fact is ascertained that the carmine fruit only looks real.

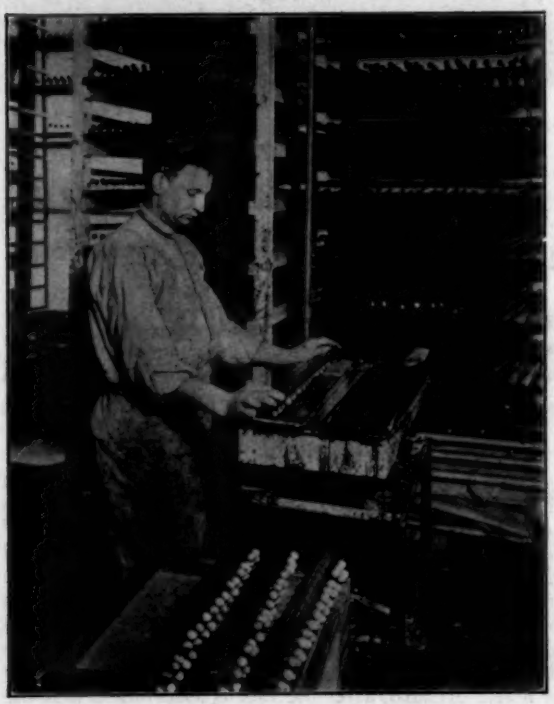
Use of Gas Conspicuous in Processes

In practically every process of artificial flower, fruit and vegetable making (for there are wonderful carrots ready to adorn the last millinery word from Paris) gas is used extensively. In the factory of Gerstenzang Brothers, at No. 370 Broadway, New York City, a great majority of the steps by which bolts of materials and rolls of cotton become ornaments are performed by the aid of gas. A 7-hp. gasteam boiler has a marvelous number of accomplishments, and pipes lead out from the boiler to supply heat for appliances in various rooms on several floors.

By gas, steam is generated to dye feathers and materials for flowers and fruits. Plain chicken, pigeon and goose feathers made into wings and ornaments are touched up by the dyers' art into all shades worn by nature's most festive birds, and the exact colors found in the garden and hothouse varieties of flowers are reproduced to an unbelievable degree.

Making and Dyeing Cherries

In this establishment an entire spacious room is devoted to the making and dyeing of cherries. First, small balls of cotton of uniform size mixed with a starch preparation, tray upon tray of them, are set on the shelves of the drying rooms, around the walls of which run coils of pipes full of steam. The walls of the drying rooms are lined with metal, and while they enclose space enough to accommodate several people, there is little temptation to step inside. When fully dried (it doesn't take long in drying rooms which can be kept at a temperature of 210 deg. Fahr.), the cherry paddings are taken out and stems appended. By attaching the stem to stick dipper arrangements the fruit padding is dipped into troughs of bright red glue, kept hot by gas, although this time a gas flame is directly in evidence under the troughs.



DIPPING ARTIFICIAL CHERRIES IN MELTED WAX TROUGH

MOULDING LEAVES, ETC., IN PRESSES HEATED BY GAS

Again gas is used in heating the tools which crimp the petals of flowers by one deft stroke in a way that takes days of sunshine to duplicate in nature's gardens. Pansy petals and silken poppy petals are crimped in a few seconds, great showers of violet and crimson lying about the workers. There are presses, too, heated by gas which mould the leaves and foliage into shapes. In fact, the blue gas flames, besides being an economic necessity, add a pleasing color note in the rainbow of silks and velvets piled about.

Melting Pot for Wax

One of the most effective gas appliances used in the artificial flower maker's craft is a great melting pot for wax, with steam pipes hid away inside the iron walls. Attached to the gasteam boiler as they are, it takes these pipes only a few minutes to bring a mass of wax to a soft consistency desirable for use.

In the artificial flower industry, which is extensive in the Borough of Manhattan, New York City, served by the Consolidated Gas Company, of New York, the use of gas in all departments, from the first dyeing of materials to the final crimping of petals, is conspicuous. Continually new devices are invented to facilitate the processes, but, without another, manufacturers are convinced that gas furnishes them the most efficient heat at the least cost for their various needs.

Gas Consumption for Rivet Heating

In a paper presented before the Scientific Society of the Royal Technical College, Glasgow, Ralph Halkett, assistant general manager of the Glasgow Corporation Gas Department, gave some interesting figures on town gas consumption for rivet-making and heating.

For turning out 180 1-in. rivets per hour 300 cu. ft of gas were required. For heating 200 2½ x ⅝-in. rivets per hour, a gas consumption of 200 cu. ft., or 1 cu. ft. per rivet, was required.

Foresees Gas Companies Supplying All Fuel Needs of Their Territories

Fuel Products Will Be Artificial Anthracite and Gas, According to Chester G. Gilbert, and Joseph E. Pogue, of the Division of Mineral Technology, of the Smithsonian Institute —Indications Point to Increase in Importance of Gaseous Fuel as Compared to Solid Fuel, Especially in the Industries—Great Wastefulness of the Steam Engine for Power Production as Compared to Internal Combustion Engine

Discussing the country's coal resources and their full utilization in Part 4 of Bulletin 102 of the Smithsonian Institute, Washington, D. C., Chester G. Gilbert and Joseph E. Pogue, of the Division of Mineral Technology of the United States National Museum, attached great importance to the full development of the possibilities of the various municipal gas plants. They foresee the time when all fuel requirements of the territories served by the companies will be met by them. As a step in this direction, they emphasize the importance of developing a process for the production of artificial anthracite; in other words, duplicating the work of nature in producing natural anthracite, with the improvement in that, where nature dissipated the volatile constituents and produced only the solid product, man will produce anthracite that will duplicate that evolved by nature and also conserve the volatile constituents.

Nature has pointed the way with natural anthracite, which was originally bituminous coal, but has subsequently, under the stress of geological evolution, lost its volatile portions, forced out by the action of pressure and heat. It is merely a matter of accomplishing a similar result by artificial means, but with the important advantage that while nature dissipated the volatile constituents and produced only a one-end product, man could catch these values and turn them to his advantage.

No Insuperable Difficulties in the Way

There are no insuperable difficulties in the way of such an accomplishment. Several processes capable of this attainment are already in course of development, although comparatively little organized research has been directed to the problem. An intensive attack such as the importance of the matter deserves would unquestionably yield an entirely satisfactory procedure. The problem, in reality, is rather one of economics than of technology. When the need of artificial anthracite is generally appreciated, a suitable process for its manufacture will be forthcoming.

One Per Cent of Country's Coal Consumed in Gas Plants

Granted the necessity for a smokeless fuel other than anthracite, and recognizing that it is chemically feasible to make such a product from bituminous coal, we may examine the existing economic practice that bears on this matter, with a view to ascertaining at what place, if any, a process as outlined above may be introduced and placed on a working commercial basis.

The gas industry, the authors point out, consists of a great number of separate plants distributed one or more each among the cities of the country.

In the aggregate these plants consume about 1 per cent of the annual coal production of the country. Their prime purpose is to manufacture gas, and this they do without adequate regard to the complete recovery of by-products, although many plants effect a partial recovery of ammonia and tar, and some gashouse coke is put upon the market. Apart from the oil gas plants on the Pacific Coast, in which petroleum is used because of its relative cheapness in that region, the gas industry of the country employs coal as its raw material.

The gas companies are by nature and in fact public utilities. They manufacture a necessity which does not lend itself to competition. They are private enterprises under municipal control, which is largely directed, however, to price restrictions, and is not constructive in the way of stimulating advances in technical procedure. With some exceptions, the average city gas plant is a small and antiquated organization, both in practice and in vision, far behind present possibilities of manufacture and application. In some cities in the United States the gas companies are in the nature of large public service corporations, which have made considerable advance in gas production, but nowhere is there full by-product recovery, and the price of city gas is uniformly high.

Centralized Purchase and Consumption of Coal

Although the city gas plant now meets rather inadequately only a small share of the fuel needs of the community which it serves, it represents an established activity which can be converted into an organization that will supply all the fuel, whether gaseous or solid, that the community consumes.

The transformation may retain the gas mains and much of the other equipment of the present type of plant, but in the place of the present procedure, with relative neglect of by-product recovery, will be substituted a by-product system of coal distillation, producing artificial anthracite, gas, ammonia, benzol and tar.

This will mean in each city a centralized purchase and consumption of raw coal, and a centralized distribution of products. The output will be limited at first at least by the demand for solid fuel. A production of ample fuel will give an excess of gas over that now produced, which will call for an expansion in the use

of gas, both in the home and in industry. Such expansion will come as a result of cheaper gas, incidental to the proposed plan of production, together with improvements in methods of utilization; and this very expansion will cut down the use of solid fuel and thereby hasten the adjustment. The three remaining first products, ammonia, benzol and tar, as already pointed out, have an unlimited field of usefulness as such, within the municipality, and by shipment will contribute a supply of raw material to the needs of the coal-products industry, thus permitting and inducing this important field of endeavor to advance beyond the limits now imposed upon it by the coke industry.

The objection may be advanced that artificial anthracite has not been perfected and placed on a commercial basis, and until such time the utilization as outlined above must wait. It is indeed true that such a process is not worked out in detail and ready to be fitted into the present gas industry, but a similar condition has been a stage in the development of practically every technological process, and the recognition of the demand has created the means for its accomplishment. But even granting the objection as valid, we find that the production of artificial anthracite is only one of two solutions to the problem of developing an adequate smokeless fuel from bituminous coal. The prime idea is to separate the heat—or energy-producing—portion of the coal from the constituents valuable as commodities, and dispose of the two groups to their mutual advantage. Hence if we convert the energy component entirely into gas and recover the by-products, we may accomplish our purpose without calling into service a single procedure which is not already in successful practice in other fields of industry. The city gas plant affords, in the second instance also, the logical point of attack for the development. Only, in this advent, in the place of artificial anthracite and gas, plus ammonia, benzol and tar, the output would be gas entirely, with a similar production of ammonia, benzol and tar.

Relative Advantages of Fuels

The twofold possibility of advance in coal utilization brings up the relative advantage of a solid, smokeless fuel versus a gaseous fuel. Their applicability for domestic use may be examined first. Solid fuel, such as artificial anthracite, requires no change in present types of furnaces and grates; is applicable to suburban and outlying districts not served, or servable, by pipes, and will always be in demand for open fires. Gaseous fuel, on the other hand, eliminates the factors of storage and haulage, reduced dirt, and through the automatic temperature control of gas-fired furnaces nullifies the conspicuous losses growing out of ignorance and waste in connection with present hand-firing. For industrial purposes, gas offers conspicuous advantages, as evidenced by the varied industrial use of a natural gas in all regions where abundance of supply creates a favorable price.

In general, gaseous fuel is bound to increase in importance as compared to solid fuel, especially in the industries. While solid fuel lends itself to conversion into power only through the agency of the wasteful steam engine, gas may be used in the internal combustion engine, which for the same equivalent consumption delivers in general over twice the power; while for purposes of producing heat, gas presents an ease of control and a mobility of application that place it beyond comparison. Moreover, and more important than all, solid fuel has already reached a far fuller measure of development than has gas, whose utilization is still in a relatively undeveloped state. Improvements in the internal combustion engine, the utilization of gas under pressure, and the application of the so-called surface method of combustion offer lines of advance that will add a growing weight of superiority to the use of gas.

For domestic purposes, however, the advantages of solid and gaseous fuel are somewhat complementary rather than opposing, so that advances toward perfecting the two types of fuel may well be simultaneous. The successful operation of an artificial anthracite plant will demand increased utilization of gas, involving the employment of the latest advances in its application, while the operation of an enlarged city gas plant, with adequate by-product recovery, however effective in the way of economical gas supply, cannot be expected to replace fully, at least for some time, the need for a smokeless solid fuel. In either event, therefore, the tendency will lead toward an increased role for fuel gas, a trend in line with the inevitable necessity for a more mobile and more efficient source of heat and power than is afforded by solid carbon.

Urges That Gas Companies Do Not Lag, But Go Forward—Think, Plan and Build

E. J. Burke Points Out Some Pertinent Facts That Should Not Be Overlooked—The Value of the Gas Associations

During the past year so many unusual conditions have arisen which effect the affairs of public utilities, declared E. J. Burke, in his presidential address before the convention of the Indiana Gas Association, held this week in Indianapolis.

The first is that of securing coal, oil and other materials which enter into the manufacture and distribution of gas. Prices, as we all know, have advanced almost beyond our imagination, and while this fact very materially effects operating costs, yet the greater problem has been that of securing these necessary materials. When the fuel and transportation facilities seemed almost hopeless, representatives of various gas associations went to Washington and presented their case intelligently and effectively. In a very short period of time, this committee succeeded in having public utilities placed on the preferred list. Immediate relief was obtained and fuel in sufficient quantities at least to prevent complete shutdowns was soon on its way in every direction.

The second is the question of labor, and one in which we are all vitally interested at the present time. The Government needs our men, and we should lend our assistance cheerfully. Their places must be filled in order to continue our business in a satisfactory manner. In the foreign countries, this problem has been solved largely by the employment of women in every department, including the manufacturing, and in our own country this action is being taken to some extent by several of the larger utilities. We can profit by the experience of our friends abroad, and, by a study of their systems, learn the plans to adopt in order to place our women workers in the positions best adapted for them. One of the important studies is that of the wage

system. These women must earn a decent daily wage or we cannot expect permanent employment or satisfactory results from them.

Increasing Production Facilities

Owing to the seriousness of the fuel situation the question of gas as a substitute for coal is one of utmost importance at this time. Few manufactured gas plants were able to supply gas in sufficient quantities to fill the demands of last winter. As a result the issuance of priority orders was necessary, otherwise the supply would have been inadequate for domestic use and the then existing industrial demands.

Conditions for the coming winter look little better than were those of the one just passed. Something must be done. If new additions to our plants are to be made, how are these improvements to be financed? Can sufficient labor and material be obtained? How much assistance can we expect from the Government? These are only a few of the matters of vital importance worthy of our consideration at the present time.

Importance of Gas Associations

We sometimes meet men who question the importance of gas or electric associations, and while they are members, yet remain so only in an indifferent way. Now to such men I desire to point out a few of the very important tasks which have been accomplished by representatives of these associations during the past winter.

An encouraging and justified result of association work was the recent appeal made to the Secretary of the Treasury, who, in turn, presented to President Wilson certain memoranda, letters, etc., sent to him by representatives of utility associations, with the result that in his reply, the President expressed himself as being in full accord with the views expressed by Secretary McAdoo. Adding to this statement he urged that these utilities be operated at their maximum efficiency, and expressed the hope that State and local authorities would respond promptly to the appeals justly made by utilities, when such a course is desirable and in the national interest.

We are all familiar with the host of petitions which have been presented before the various State commissions, many of which were promptly laid aside. The President's reply to the Secretary, however, resulted in a large number of such cases being reopened, and many of them reported on favorably.

Bringing the importance of maintaining an association of high standing a little closer home, I refer to the valuable aid rendered many of our Indiana utilities by our own organization during the past year. I hope, therefore, that our members will all strive to exert just a little greater effort in the future to make the Indiana Gas Association one of the largest and best in this country.

Referring again to petitions for relief, I want to urge upon the management of gas companies the importance of having their cases well prepared before filing them. Too much stress cannot be laid on this important feature, and, as a proof of this, I recall to your mind a recent finding by the Utility Commission of Illinois for certain gas companies. These requests for higher rates were granted with little delay, and after the matter was settled, it was the firm opinion of experts that the secret of the success was the excellent preparation of each case, in which was proven conclusively that the companies were efficiently managed from every point of view.

We must win the war, and yet business must not stop. To do our part in the service of this great nation of ours, we must, as our illustrious President has recommended, run our plants to their full capacity. This means efficient management, planning in advance, careful financing and the adoption of the most economical, yet business-like, principles of your business. Help win the war by doing your share; keep your plants in full operation; don't lag, but go forward; think, plan and build. By doing so you help your country, your patrons and yourself.

Few Inventions Brought to the Front by Demands of War Are Achieving Better or More Important Results Than the Gas Furnace

Of the many inventions brought to the front by the demands of the war very few were achieving better or more important results than the gas furnace, declared Ralph Halkett, assistant general manager of the Glasgow Corporation Gas Department, in a paper before the Scientific Society of the Royal Technical College, Glasgow. It is speeding up the output of munitions, performing tasks that other furnaces are either not equal to, or performing very indifferently, while saving labor and economizing in floor space, and often in money. One occasionally hears of it falling short of expectations, but in most of these cases the reasons can be summed up in three words—ignorance, carelessness, indifference. No matter whether it is the seller, the buyer, or the man who installs them or works them, one and all are the better for an intimate knowledge of the general principles underlying the erection and working of gas furnaces. About five years ago the Glasgow Corporation Gas Department recognized that a field for utility lay in the future of the gas furnace, and consequently prepared and equipped a department for that branch alone, and placed it in charge of a carefully and practically trained expert. Since the outbreak of war this provision has proved itself of great value to the department, and much assistance has been afforded where gas furnaces have been supplied.

How the Gas Companies Are Helping the Nation

The Lawrence Gas Company, of Lawrence, Mass., has built a 20-ft. exact model of the Battleship Massachusetts. It is fully equipped and lighted and mounted on an auto truck. It will be used to boom the Liberty Bond sale. As there were no floats in the parade April 19, it was stationed on the Common and used as a speakers' stand. It is a splendid piece of workmanship, and required considerable skill and knowledge of shipbuilding to produce it. It was seen sailing along the main streets of Lawrence—a silent salesman of the Third Liberty Bond drive.

Possible to Remove a Purifying Unit for Revivification without Interfering with Operation of Other Units in New System

Oxide is Held in Containers Which are Removed Bodily from Casings in Series and Independent of Each Other—Saving in Labor a Big Feature of Method—Flexibility of System in Relation to Expansion Similar to Sectional Cabinet Idea

By CHARLES H. CLOWER

A quicker, safer and more economical method for recharging a purifying box has been a problem with which all managers of gas companies have had to contend. With this and other ideas in mind, the writer, in his capacity as gas engineer of the Cruse-Kemper Company, of Ambler, Pa., has designed a purifier box that is an interesting innovation.

The principle involved in the new purifier is practically unchanged from the old method of oxide purification, but the manner of application has several distinct changes.

Conditions That Contribute to Variation in Size and Design of Purifying Boxes

There are numerous conditions which tend toward making a wide variation in size and design of purifying boxes for a given output; generally they are as follows: (1) Labor conditions; (2) kind of gas to be purified; (3) various empirical formulæ in use for calculation of oxide capacity, both for surface and volume; (4) the tendency of managers of large companies to make a minute study of their particular conditions and evolve a formula which may be of doubtful value to others; (5) general tendency to install a larger system than necessary to take care of discrepancies in calculations and nearly always with a large margin for possible future expansion; (6) various methods adopted for handling oxide; (7) design of by-pass systems and flow of gas in boxes.

These objectionable conditions are eliminated in the new purifier design, as will be seen from the following description of the ideas involved and advantages to be gained:

1. Emptying and recharging can be a one-man operation.

2. The oxide is held in containers which are removed bodily from the casings, special means being provided to remove a container of foul oxide and substituting with a container of fresh oxide, and the unit again set in operation in a very small fraction of the time ordinarily required. Extra containers are supplied for this purpose.

Contents Can Be Attacked in Open at Leisure

3. The containers are of angle frames with wire mesh covering, and are collapsible; therefore after a fouled container is removed from the casing its shell may be removed and the whole mass attacked in the open at leisure and spread around for revivification in the usual manner. Also after oxide has revivified it can be replaced in a container in the open at leisure, and held in readiness for another recharge. Sections of containers are interchangeable and reversible.

4. The operation of emptying and recharging is entirely done in the open, hence eliminating the danger of sending men into boxes that have not been sufficiently purged.

5. Units are standardized and of such size that they can be carried in stock and shipped on a car riveted up; any intelligent mechanic can set them on foundations and connect up with a system, thereby eliminating to a great degree the erection expense.

6. Additional units may be added without seriously disturbing the operation of a system.

7. All parts are so designed that a minimum amount of time and labor are expended in cutting out a unit, opening cleanout door, removing container, substituting another container, closing door and again setting in operation.

8. The by-pass system has been standardized by the employment of a series of ducts and special valves by means of which any unit can be cut out without disturbing the operation of the others.

9. The oxide in the container is attacked from all directions, hence box should prove more efficient, as there will be less likelihood of channels forming through same.

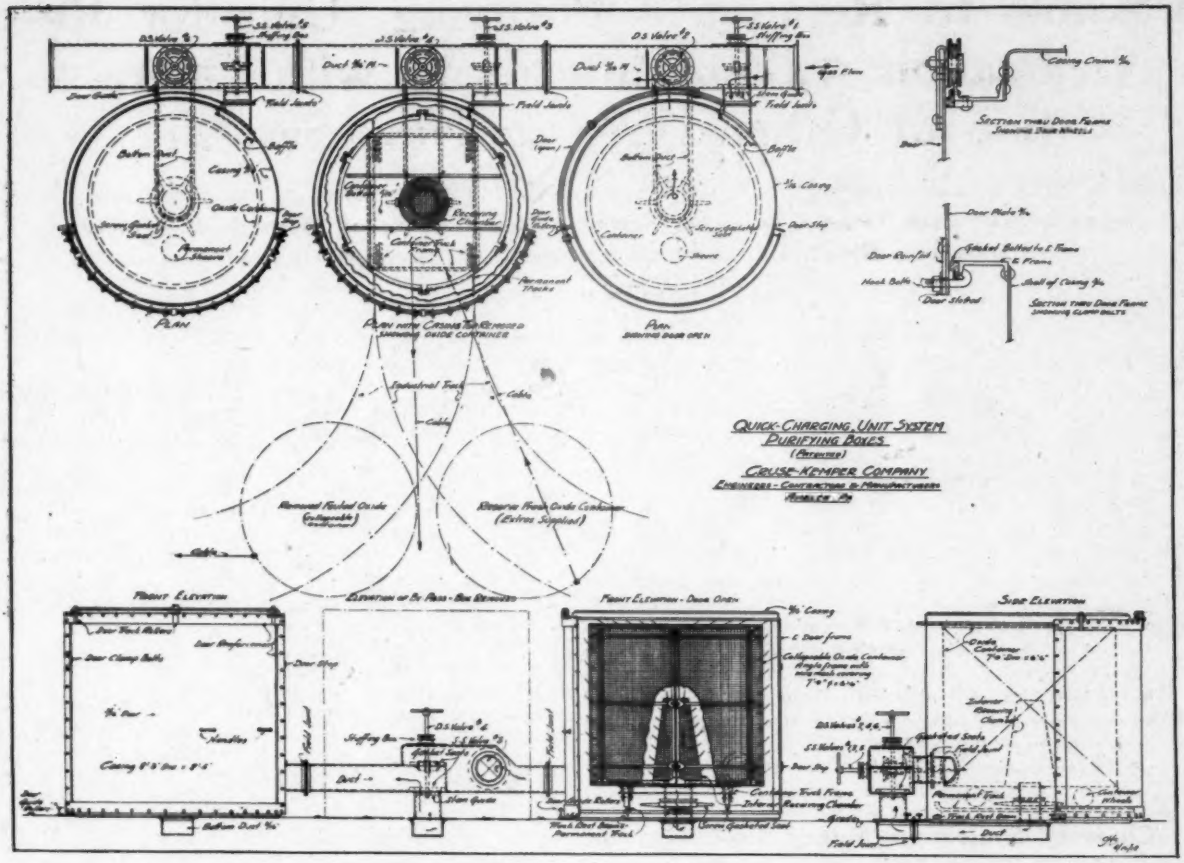
10. Casings may be made of thinner steel because of the absence of concentrated loads from tray beams.

Operation

11. The action of a unit may be determined carefully from tests made for varying conditions, and as many units installed as required. It will not be necessary to allow for possible expansion; when this time comes, new units may be obtained and installed quickly.

The operation of the new unit system will be as follows: The gas comes in from the right-hand side, as shown by the direction of the arrow in the accompanying illustration; valves 1, 3 and 5 are open, thus permitting the gas to enter the casings; valves 2, 4 and 6 are double seated, and are in contact with the upper seat, thus preventing gas from by-passing in the ducts and at the same time unsealing the outlet ducts; hence it will be seen that gas enters casing spreading all around outside of the oxide container, the shell of which is wire mesh, and with the pressure behind it, it must force its way through oxide in order to reach the wire mesh receiving receptacle in the interior of bed, from whence it enters the outlet duct and is passed on to the next unit, where the same operation takes place, the succeeding valves being in the same position.

The operation of emptying and recharging will be as follows:



Assuming that the middle unit is to be recharged; close double seated valve No. 4, sealing the outlet (lower seat), and thus opening the by-pass, then close valve No. 3; hence other units are continually in operation.

If it is desired to purge the boxes, a steam line can be connected with casing with an individual valve to each casing. On the top of the box there will be a blow-off cock, which can be opened while box is being purged.

The door will be opened by loosening the nuts of hook bolts around door frame only sufficiently to permit swinging bolt out of slotted hole in door. After these bolts have been swung out of place, the door can be slid around the shell of the casing on the rollers and track provided at the top.

Drawing Container Out of Casing

The contact of the gasket seat sealing the bottom of the oxide container with outlet duct is then broken by means of unscrewing (lowering) the seat.

After breaking this seal the oxide container is drawn out of casing on the tracks laid up to the door, these tracks being made to register with the permanent tracks inside of casing, on which the wheels of the oxide container always rest when container is in position. The container is removed from the casing by means of a hand-operated winch, auto truck, electric motor or any other suitable means. After a container is removed, another container with fresh oxide, which has been held in readiness, is inserted in the casing in a similar manner as the one removed. The gasketed seat is then screwed up to contact with this fresh container, and the door closed; the valves are then set in their former position and the unit is again in operation.

Any of the other units may be operated in a similar manner.

Average Coal Consumption for Power of 5 lb. Per H. P. Hour Could Be Reduced to 1¼ lb. If Gas Engines Were Adopted

The Census of Production of 1907 estimated the average consumption of coal for power at 5 lb. per horsepower-hour, and that figure, if gas engines were adopted, could probably be reduced to about 1½ lb., declared P. N. Everett, designer, Internal Combustion Engine Department of the British firm of Sir. W. G. Armstrong, Whitworth & Company, Ltd., in a paper before the Tyneside Engineering and Shipbuilding Draughtsmen at Newcastle.

The two-cycle low-compression engine offers most promise of future success, but it will need much more experimental work with a view to improvement of detail, as the present arrangements are of a crude nature, and the low mean effective pressure in the cylinder gives a high weight per horsepower.

Gas producers for use with gas engines are made to work with anthracite, coke, bituminous coal, wood and

even refuse—one even works on fish refuse. Very large plants operate on the Mond system, in which bituminous slack is used. The South Staffordshire Mond Gas Company is an example of a large central depot where gas is generated on an economical basis which allows for the recovery of by-products, the gas being distributed throughout the district in large pipes. The plant was put to work in 1905, and consisted of eight producers 10 ft. in diameter, each of a capacity of 20 tons of coal per twenty-four hours, together with the necessary tar plant and sulphate of ammonia plant. The average output is about 140,000 cu. ft. of gas of calorific power 150 B.t.u., 80 lb. of sulphate of ammonia and 190 lb. of tar per ton of coal. The gas is distributed at 5 lb. pressure through about 30 miles of pipe. A large number of engines are supplied, and the average consumption is about 70 cu. ft. per brake-horsepower hour. A very promising feature of the plant is that it will handle very poor fuels, even those containing up to 40 per cent of ash. Left in the mines at present because there is no market for the low-grade fuel, it would be obvious that there was another opportunity of increasing the useful life of our fuel reserves. About 25 to 30 hp. was generated per square foot of grate area, as against 12 hp. for the marine boiler.

As regards detail improvements in the gas engine, the following are the obvious directions in which to look: Increase in power per cylinder, reductions of the losses in the heat balance, reductions of the ratio of maximum to mean pressure in the cylinder, and special improvements designed to make an engine more suitable for a particular service.

Chart to Determine Money Lost Up the Chimney

The accompanying chart has been developed by the Uehling Instrument Company, 71 Broadway, New York. It is of unusual interest and value at the present time, when the coal problem is so important, for it enables anyone to quickly and closely estimate the money now being lost up almost any chimney due to low CO_2.

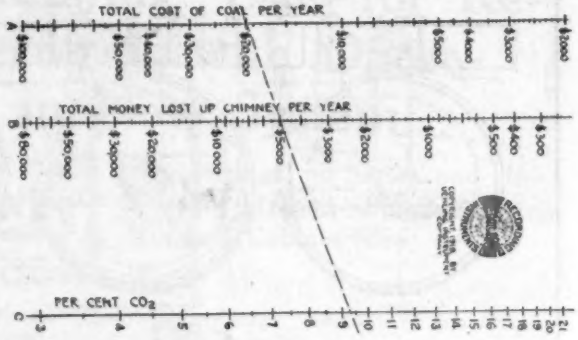
Simply connect the percentage of CO_2 (shown in Column C) with the money now being spent per year for coal (shown in Column A), and the intersection of the connecting line with Column B immediately gives the dollars rolling out of the chimney in the form of heated gases.

Example: If $20,000 is spent per year for coal burned in a furnace whose average CO_2 registers 9.3 per cent, what is the approximate money lost up the chimney per year?

Solution: Connect the $20,000 (Column A) with the 9.3 per cent (Column C), as indicated by the dotted line drawn across this chart, and the intersection with Column B shows the approximate yearly loss to be $5,000.

The object of this chart is to show that a high percentage of CO_2 is most desirable. To be sure, even where the CO_2 is as high as 21 per cent, the theoretical maximum, there is a loss, because in the average power plant the flues gases leaving the boiler have a temperature as high as 500 or 600 deg. Fahr. Loss, therefore, is inevitable, unless a blower is used for exhausting the gases and some sort of interchange system is installed for either heating the feed water or preheating air and leading it under the grate.

It is significant that most of the large power plants



of to-day have adopted CO_2 instruments that record automatically and continuously. The reason for this is to keep constant tab on the workers in the boiler room and the efficiency of combustion. The recorder may be placed at any convenient distance from the boiler, in the office of the chief engineer, owner, manager or superintendent, while an auxiliary CO_2 indicator is placed on the boiler front in full view of the fireman. The function of the indicator is to keep the fireman constantly informed as to the efficiency of his own work. This feature is most commendable.

Coal cannot be saved by a CO_2 machine alone. If no attention is paid to the indicator or recorder, the installation of such apparatus borders on foolishness. The records should be carefully watched and studied and adjustments should constantly be made in firing methods until the best percentage of CO_2 is obtained. After the best mark is reached, fluctuation of the CO_2 line below that mark to any great extent should not be allowed.

This chart is based on a flue gas temperature of 600 deg. Fahr. and an outside air temperature of 60 deg. Fahr. Where the flue gas temperature is higher, or the outside air temperature lower, the money loss will be correspondingly increased. On the other hand, with a higher outside air temperature and a lower flue gas temperature, the money loss is proportionately decreased. Further, in the construction of this chart, it has been assumed that the coal has a calorific value of 14,500 B.t.u. per pound of combustible.

It may also be interesting to point out that where there is only 3 per cent of CO_2 in the flue gases, 76 per cent of the heat value of the coal passes up the chimney as waste under the conditions outlined above. It is impossible, however, for these gases to contain as low as 2 per cent, because it would require more than the original quantity of heat in the coal to heat the enormous surplus of air to a temperature of 600 deg. Fahr.

Recommend Service Charge for Toledo Natural Gas Company

Arbiters in the gas rate case recently reported to Mayor Schreiber their approval of a 35-cent ready-to-serve charge by the Northwestern Ohio Natural Gas Company, Toledo, Ohio.

The company's schedule, calling for a monthly service charge of 35 cents to each customer, was filed with the State public utilities commission last fall.

Making the New Business Department An Asset

In the Modern Business World It Is Not Considered Good Practice to Run Any Department At a Loss—A Lesson from the Wartime Readjustments in Automobile Selling Practice

By J. E. BULLARD

The majority of gas companies have found the new business department to be an expense. It is true that as a result of the work that has been done by this department the gas revenues have increased, but in the vast majority of cases it has been necessary to appropriate some of the gas revenue to make up the deficit of the new business department. Many gas men, in fact, probably most gas men, have considered this state of affairs a necessary evil. As a result of it, however, the curtailment of expenses has begun in the new business department.

As a result of it, it has never been considered good policy to allow the activities of the new business department to exceed a certain maximum each year. The more business this department did the greater would be the cost. It made little difference whether the salesmen were paid on a commission basis or on a straight salary, the more appliances they sold the more it cost the company, and in many cases it was as necessary to curb the ambitions of the salesmen as it was to enthuse them. If they exceeded a certain maximum the burden would become more than the company could bear. It was always necessary to allow the gas revenue to keep pace with the increasing expense. This naturally explains the contention made by numerous gas company commercial men that there was a comparatively low limit to the remuneration that a merchandising man could expect to receive in the gas business.

There is little doubt that most gas men have considered this state of affairs to be peculiar to the gas business. Few, if any, would have had the temerity to even suggest that a similar situation might be found in such a young and robust business as the automobile business. The automobile business has been held up as an example of all that is good in merchandising to such an extent that people have become accustomed to believe that everything connected with the industry is good; that there are no evils existing in it.

Practice Destructive to Stability of Business

Nevertheless, the automobile business has had a condition to face that has not been dissimilar to the condition of the new business departments in the gas industry. When the motor car industry was young the prices of cars were high, and there was a comparatively small market to draw upon. A man had to possess some wealth in order to own and operate a car. To stimulate the market it appeared to be necessary to create among the men who could afford cars the habit of buying new ones each year. Many of these men would not buy new cars unless they could dispose of their old ones. Therefore, the practice grew up of making more or less liberal allowances for the old car towards the purchase price of the new one. The larger the industry grew the wider this practice spread and the more liberal became the allowance until it reached the point where a dealer in order to make a sale would risk a part or even all of his profit on the sale of the new car in an allowance for the old car.

Many dealers were driven into bankruptcy as a result of allowing more for the old car than the amount for which it could be sold, plus the profit on the sale of the new car. The practice of liberal allowances no doubt tended to increase the sale of new cars. Hundreds of people who would otherwise have used their old cars for a season or two longer were influenced to buy new ones on account of the very liberal allowances made by dealers for the old car. The practice, however, did make the selling of motor cars a very much more precarious business than the general public ever considered it. In fact, some of the most prosperous dealers refused in later years to make any allowances at all on old cars. They would take these cars on consignment, and sell them for the highest prices they could get, but they would not make an initial allowance for the car. In some cases these firms would make little or no charge for selling the old car, while in others all the costs of making the sale were charged up to the customer, an itemized account of every cost being kept and a fixed charge being made for the overhead, so that the customer could see for himself just what the cost of the transaction had been. This method, however, was confined for the most part to the higher-priced cars. In the case of medium-priced cars, the "used-car evil," as the condition was called by the dealers, was most acute.

Few dealers could show an annual balance sheet in which a certain amount of the profits were not used to meet the loss due to the handling of used cars. In other words, the used-car department was a liability, and in some cases a serious liability, rather than an asset. When this condition became the most serious along came the war to make it even more menacing. The war reduced the salesforce and also the supply of cars. It has been hard for several years to get enough of many makes

of cars to fill the demand, and now, with the reduced output and the railroad congestion, the condition is worse than ever.

Turning a Liability Into an Asset

This surely was not a very pleasant condition to face. Thousands of dealers were face to face with the most serious crisis in their business careers. Something must be done to offset the loss caused by the difficulty in securing deliveries of new cars. One way, of course, would have been to do away entirely with the used-car departments. These departments had been a liability, anyhow, and by doing away with them expenses could not only be cut down, but the losses that had been due to them would be eliminated. Another way, and a better way, however, appeared to present itself. That way was to make the used-car department an asset rather than a liability. In other words, to make the handling of used cars yield a profit rather than net a loss. This is the way out that the wisest dealers are taking. They are finding that war conditions are not an unmixed evil. They are finding that it is possible to make the used-car department considerably more than offset the new car shortage, which, after all, is not proving nearly as serious as many dealers had anticipated.

Used cars are now being bought at a price that will permit of their being overhauled, repainted and sold at a profit. The profit may be small, but it is more often than formerly a real profit rather than a loss. Some cars are being transformed into trucks, and the used-car department in this way made to help out the repair shop. Others are sold for passenger car service. The real point is that this department is now being placed upon a solid business basis.

A Lesson for the Gas Man

There surely is a lesson for the gas man in the action that has been taken by automobile men. For years the gas company new business department has been conducted at a loss. When the war came along, and expenses went up, it was necessary to do something. In far too many cases the thing that was done was to disband the salesforce, a force that may be more urgently needed than the force in any other department of the company before conditions again become normal.

The logical course to follow, the one that would have resulted in the greatest good and the most permanent good would have been to have made the new business department an asset. In fact, some gas companies have done this very thing.

Parasite Departments No Longer Countenanced

In the modern business world it is not considered good practice to run any department of a business at a loss. Parasite departments, in fact, are no longer countenanced in the most prosperous organizations. Each department must show that it is more than paying its way or changes are made. These changes either mean that the department is made to pay its way, or it is discontinued altogether. Some departments, however, are so important to the healthy growth of the business that they cannot safely be discontinued, so ways must be found to make them self-sustaining.

In the gas business the tendency has been stronger towards discontinuing the new business department than is good for the gas industry. There is probably no industry in which there is greater necessity of a well organized and efficiently working business building department than in the public utility business. Public utility companies have been called natural monopolies, signifying that they have no competitors, when, as a matter of fact, though they may have no active competitors, they have the most dangerous potential competitors any companies can have. Each community which grants a franchise to a public utility company is a potential competitor of that company. At any time it sees fit it can plan to enter into competition or to take over the company. No matter what the existing laws are, if enough of the citizens in a given community agree upon a change these laws can be changed.

The Time Opportune to Make Changes

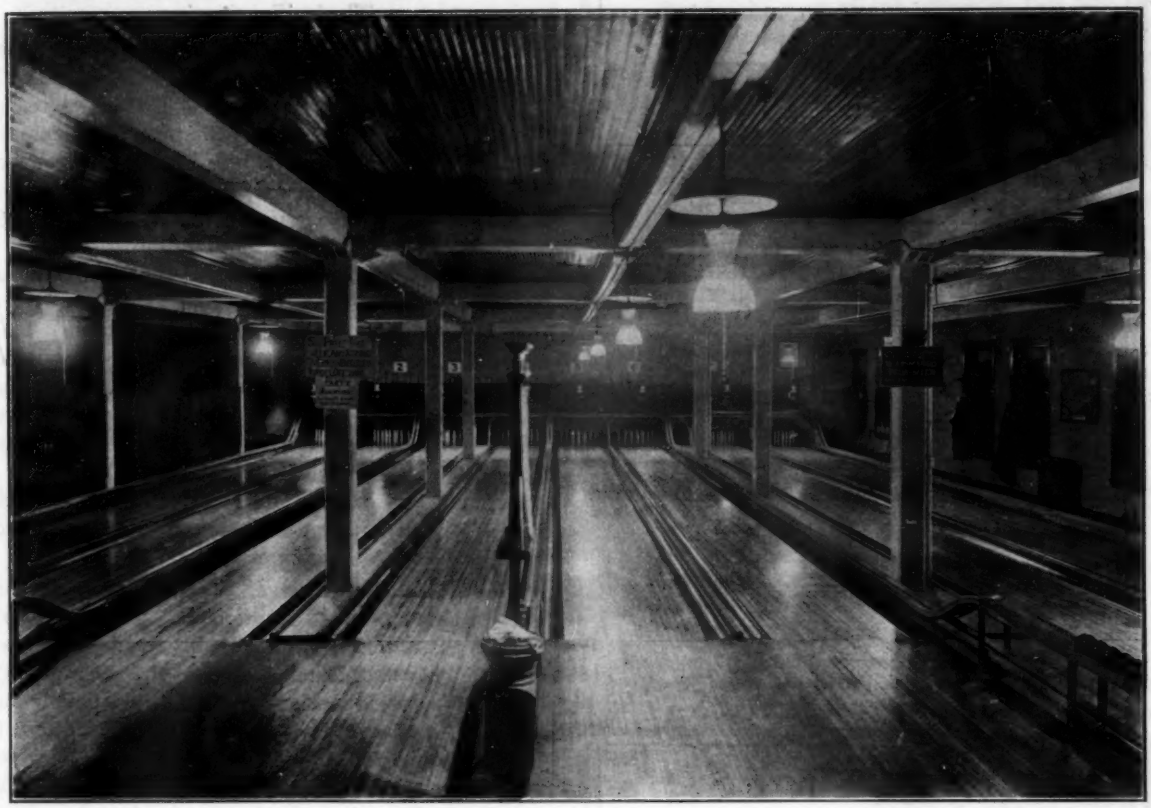
There has never been a time more opportune to place every gas company new business department upon a self-sustaining basis than to-day. Most gas companies are finding no difficulty in selling all the gas that they can produce and distribute. In fact, not a few companies have found it difficult to meet the demand. Therefore, it would not so much matter if the gas consumption did not increase so rapidly as a result of the efforts of the new business department, provided this department was paying its way. The cost of everything has been soaring. It has been necessary to advance the price of gas appliances, anyhow. It would require only a little more courage to advance them to a point that would allow a real profit. Many automobile dealers have taken this course with their used cars, and if they have been able to do so in a highly competitive business, there is certainly no reason why a gas company, having no active competitors, could not do so also. Of course, the point may be made that if the gas company does this department stores and other dealers will sell inferior ranges at lower prices than the company sells its high-grade ones. This argument is really more of an admission of weakness than a reason why. If a gas company new business department is unable to show that the goods it sells are better than those sold by cut-rate establishments, there is very little reason to believe that it will ever be able to become self-sustaining or to do the company any great amount of permanent good, and the sooner such a department is disbanded the better it will be for all concerned.

Changing Business Practices

Gas companies cannot go on indefinitely conducting the merchandising end of their business in the unsound way that it has been conducted in the past. Business ethics, business tactics and the way of doing business are all constantly being advanced. Practices that were considered good business twenty-five years ago are no longer tolerated. Only a few months ago, John Wanamaker, who has been held up by many as the finest example of the really successful retailer, announced in his advertisements that certain discounts that had been in vogue for the entire life of the business were being discontinued, for the reason that they were not considered entirely fair. It was announced that the most honorable way to conduct a business was to use all purchasers exactly alike.

Are gas companies conducting their business along this line when they sell appliances for less than cost

A Visible Proof of What Can Be Done in Bowling Alley Illumination, Using Gas



THE JEFFERSON ALLEYS IN PITTSFIELD, MASS.—INSTALLATION SECURED BY PITTSFIELD COMPANY OF WHICH H. C. CRAFTS IS MANAGER—TWENTY-ONE NO. 2076 WELSBACH LAMPS EQUIPPED WITH NO. 224 SHADES USED

—and appliances are sold for less than cost unless the department is entirely self-sustaining — are gas companies doing a just and an honorable business when at the end of each year a certain sum must be taken from the gas receipts to make up the deficit shown by the new business department? Is it any fairer to those who have purchased their gas appliances elsewhere to force them to help pay for those which the gas company sells? This is a very serious question, and it is far better for the gas man to answer it himself than to leave it for others to answer.

A Tide-over Pending Rate Increases

By far the best way to answer it is to follow the example of the automobile dealers and of John Wanamaker, and discontinue the practice. Now is the time to do so. In every business reforms are taking place that could not be brought about with the same ease under normal conditions. There will probably never again be a time when gas company new business departments can be placed upon a genuine profit-making basis easier than they can be at this time. All that is necessary is action, and immediate action. Little courage is required. In a great many cases it is a choice of disbanding the force altogether, or of making it self-sustaining.

It is difficult to secure increases in gas rates. The cost of labor and raw material has been soaring. Most companies are short handed. A dangerously large percentage of the best men are leaving the industry, attracted either by the call to the colors or the higher wages offered in war industries. When the war is over it is going to be hard to replace these men. The public is now more lenient with the service that gas companies are able to render than it will be when times become more settled, and there is less free publicity in regard to the handicaps under which they are laboring. The new business department is necessary to soothe the feelings of the public. There is a work for this department that cannot be done by any other department of the company. Every new business department can be continued if it is made self-sustaining. Every new business department cannot only be made self-sustaining, but it can even be made to yield a profit that will help offset the loss in gas net profits.

Brooklyn Company's Stock Issue Authorized

The public service commission recently granted the Brooklyn Borough Gas Company permission to issue $250,000 in common stock to pay for improvements in the property already made and for other improvements to be made shortly. The stock is to be issued in 2,500 shares of a par value of $100, and is half of an issue of 5,000 shares authorized by the stockholders on Oct. 21, 1913, the first half being already issued.

AMERICAN
GAS ENGINEERING JOURNAL

FIFTY-NINTH YEAR

Published Weekly by
AMERICAN GAS LIGHT JOURNAL, INC.
42 Pine Street, New York, N. Y.

ELBERT P. CALLENDER, *President*
STANTON G. KRAKE, *Vice-President*
FREDERICK A. SOUTHWORTH, *Secy-Treas.*

EUGENE C. MILES, *Editor*

Subscription $3.00 per year, including postage in the United States, Mexico, Cuba, Porto Rico, Hawaii or the Philippines.
In Canada, $4.00 Foreign, $5.00
Single Copies, 10 Cents.

WESTERN MANAGER
E. B. FRITZ

CHICAGO OFFICE
537 So. Dearborn St.

Entered at the Post Office, New York City, as Second Class Matter.

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Gas Companies Supplying All Fuel Needs of Their Territories

A very interesting prospect is offered in a paper prepared for the National Museum by Chester G. Gilbert and Joseph E. Pogue, which is abstracted in part elsewhere in this issue. These writers foresee the gas companies supplying all the fuel needs of their territories, but the means they suggest is revolutionary, and it is extremely doubtful it will ever be followed in the manner they outline.

Following their idea of gaseous fuel and artificial anthracite, a great part of the present gas plant equipment in the country would have to be abandoned. The AMERICAN GAS ENGINEERING JOURNAL many times has indicated the possibility of a similar development—the gas companies supplying all the fuel needs of their territories. But, in its opinion, these needs will be filled by gas and coke. Such a condition would necessitate no revolutionary development or extravagant abandonment of plant, and, we believe, would adequately fill the need.

The authors, we believe, exaggerate the importance of the antiquated plants in the country. There are a number of such, deplorably inadequate and obsolete, but they do not represent the average city gas plant, as these writers would imply. This is but a detail, however, in line with the lack of full knowledge of the present-day gas industry which they reveal in their ignoring the important advances the manufactured gas industry has made in applying gas to the industries by going to the natural gas adaptations to prove the practical possibility of utilizing gaseous fuel in industrial work.

Their's is a forward-looking paper; one that the gas man who strives always to discount the future should read.

Who Will Replace Them?

With alarming frequency word comes in that this or that new business manager has obtained employment outside the gas industry. And more serious even than these notices are the advices—not so frequent, for there are fewer of them—that this or that industrial gas engineer has also found employment in some shipyard or munition factory. A situation is revealed in these messages that may have serious and far-reaching consequences to the gas industry.

A considerable amount of effort and money have been spent by gas companies over a period of years in training employees in these classes. And within the space of a few months, in a flurry of totally unnecessary panic, they have permitted them to get away from them.

The big question looms up: Will they come back

when they are wanted? The likelihood is that a very small proportion of them will.

It is an undeniable fact that technically trained men in the gas industry are woefully underpaid. Yet it has been able to attract and hold a sufficient number of such men—quite frequently men of unusual talent at that—to carry on its work. Why has this been?

For one thing, because the spirit of public service is strong in most men. One former gas company manager wrote us some time ago: "I will welcome an opportunity to again get back to public utility work, even though it does not pay anywhere near the salary I can get in other lines. There is something interesting and pleasant in giving service to the public that in my mind far surpasses any other line of effort."

Because such ways of thinking are reasonably common the gas industry and other public utilities have been able to retain the highly trained men they require in their work at salaries that would enrage a steelworker had anyone the hardihood to offer him such terms.

Another factor that has held such men in the employ of gas companies is that lack of personal initiative that seems a characteristic of technically trained men; the same characteristic that impels the young graduate to seek employment on the surveying forces of some railroad at forty dollars a month when he could get ninety or a hundred on some construction job. He reasons it out that the construction job will be completed within a definite time and he will have to find another position, whereas the railroad force is a permanent job.

The trained employee in the gas company has found his tasks so exacting that, while occupying one position, he did not have the opportunity to seek a better, and he did not have the courage to give up the post that at least was buying his daily bread in order that he might find the time to seek this better position.

The consequences of the flurry of panic we are now apparently about through have been to take the initiative away from him entirely by cutting out the props under his feet. He has had to find another job, and has found the finding not as difficult as he imagined.

When the gas industry wants him back again what will his attitude be?

He will have become accustomed to a higher rate of pay. He will have learned that a permanent job is not the highest ideal in life; that for every man of ability out of a job there is at least one vacancy open.

And the gas industry will not even be able to attract him on the basis of the permanency of the position. Twice in the past ten years he has seen the same thing happen. He must be innocent, indeed, to believe it cannot happen again.

In the case of the commercial men the loss we will sustain will be mainly a moral loss and the loss of the money we expended in training them. In some cases, too, it may be even that we will benefit. Many new business departments were badly in need of revamping.

But in the case of the industrial fuel engineer the consequences may dig deeper. It may be that we have jeopardized our opportunities in what, a year ago, was our most promising field.

There has not as yet been developed in the field more than a sprinkling of men capable of securing installations in which original thinking or sound knowledge is required. And some of these few have already been lost to us. They will not come back.

"But," we may argue, "gas has so many advantages as a fuel that it will almost sell itself."

Very true, but there is producer gas. The average manufacturer kept away from it to avoid the expense of installing the producer plant and having on his forces men capable of operating it. There was nothing more certain in the manufacturer's mind than the "certainty" of supply of city gas, but he learned last winter it was not so certain at all. Thus our biggest selling point has been lost, and producer gas assumes bigger proportions as a competitor.

From a position of practically easy selling in the industrial fuel field, we are confronted with a situation and memories that will necessitate our having the best kind of industrial gas engineers we can get hold of. If the best of those we have developed are engaged in designing units in the employment of manufacturers with the intention of utilizing producer gas, we will be faced with very serious competition, indeed.

The Ruling Faction of Tomorrow

Many of our executives are needlessly worrying themselves, we think, over the possibility of labor ruling all things after the war. The thought comes originally from England, but it is taking firm root here, nevertheless. To the mind of the AMERICAN GAS ENGINEERING JOURNAL, unless certain factions of the labor group radically and promptly make a complete turn-about, the labor element will have less influence on after-the-war legislation than possibly any other element in our national life.

Although possessed of tremendous potentialities for good or bad, organized labor is not numerically a predominating element by any means. Its strength lies in organization.

At the present time we are taking hundreds of thousands of men from all walks of life (including organized labor), arming and training them, and sending them overseas to battle. Their comfort, health and very life depend upon how those of us who remain behind conduct ourselves.

Everything we do that facilitates their effort or contributes to their comfort and safety awakens within them a responsive glow of appreciation and gratitude.

Every selfish act that we may do that interferes with

relief getting to them, that might compel them to meet the Hun with empty rifles, is a shaft directed at their very existence. The resentment that such conduct on anyone's part engenders in their hearts is not the kind that flames and vanishes. It is the kind that sinks deep in the recesses of their minds; that smolders, but never dies.

Even when conquering, these men have their backs to the wall. An uninterrupted flow of munitions is as essential to life for them as is an uninterrupted flow of food; even more so.

These men have already chalked up some scores against organized labor, the biggest of them the conduct of the shipworkers. A few more such memories and they will be set forever against anything and everything organized labor represents.

When the war is over there will be millions of these soldiers. Numerically they may even be stronger than organized labor. It is probable that they will never organize formally as a voting unit, but in principle they will be organized undissolvably. They will constitute a predominant factor in our national political life. What they favor will come to pass. What they oppose will fail miserably.

Standing fast behind these men, and seeing to it that they lack nothing that may make their task easier and safer, is primarily patriotism and decent justice. It is likewise very sound common sense.

It Is Not a Question of If You Get It—You Have It

We hear a great deal about retrenchment, of shutting down on merchandising, etc., to relieve the loads we are asked to carry. All minds apparently are engrossed on one thought—retrenchment. Retrenchment is the most overplayed and abused word in the vocabulary of the gas industry.

Meantime the inevitable scoffs at them all. Each is offering a suggestion to avert a development that has already occurred. The excessive demand for gas is existent. Talking about averting it is futile. What we should concern ourselves with is how are we going to meet it?

Most companies will find little difficulty getting through the summer. With the next winter will come the big ordeal.

Whether gas companies sell gas heaters or not, gas heaters will be purchased and used in tremendous quantities. The difference will lie in that, heater for heater, the demands upon the gas supply will be proportionately greater. Those who cannot get heaters will heat by means of the cooking range. The great general public is not going to shiver to any unreasonable degree, whether, in averting it, they put wrinkles on the gas man's brow or not.

The thing to do is to sit back and *think*.

The Fuel Administrator is advertising broadcast the saving of coal to be effected by heating and cooking, wherever possible, with gas. The figures he presents are conservative. He is doing what the gas industry has been talking of doing—giving national publicity to gas and tacking on a clincher that is certain to pull—that of patriotic duty.

The Government is in need of vastly increased quantities of toluol. Manifestly the company with an output of a million cubic feet a day would produce a double quantity of toluol were its output two million cubic feet of gas per day.

Every condition points to an increased use of gas. The deficiency lies in the means to produce and distribute it.

We cannot avert increased demands as the months pass. Companies that edged through by a narrow margin last winter will be faced with a more alarming situation next winter.

Undertaking new construction is unadvisable except on essential works. Gas works construction under the circumstances are as essential, and even more so than munition plant construction.

Extensive enlargement on the part of any gas company is near to being financially impossible. In the case of any company, any enlargement made to-day, if the past is any precedent, is in effect penalizing itself for the future.

If it were possible to profit by the great demand, the extra costs of the enlargement might be written off in the business of the next few years.

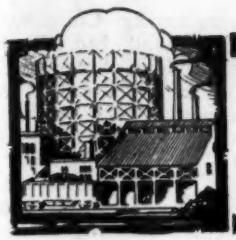
But the immense demands of to-day mean nothing other than trouble. The margin between cost of production and selling price is so close that an enlarged demand is a burden rather than a relief.

There will, of course, be increased rates. But the increases will be on the basis of "a *reasonable* rate of return." They will not provide the excess necessary to write off the extra cost of construction undertaken at this time in a relatively short period.

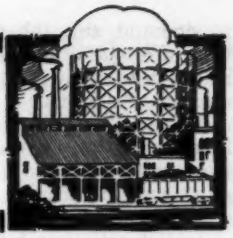
But there must be some solution to the problem. Extensive enlargements is the only solution to the problem the gas companies and the nation are faced with. How can these enlargements be made without unduly penalizing the gas industry?

That is the problem that must be worked out.

The Union Gas & Electric Company, of Cincinnati, Ohio, held a patriotic meeting at the company's offices April 16. The presentation of a beautiful silk flag from the employees to the officials of the company was the chief feature of the meeting. The report of the amount subscribed by the employees to the Third Liberty Loan was made. Patriotic addresses were made by Corporal Alexandria, B. H. Kroger and officials of the company, and arrangements are being made to have the Base Hospital Band give a concert.



NEWS OF THE GAS INDUSTRY



Declares that Next Two Years Will See a Development in the Gas Industry that Will Surprise All

This is the Assertion of Dr. Shaul, New President of the Indiana Gas Association at its Annual Meeting in Indianapolis April 24—Important Suggestions Brought Out by Former President E. J. Burke, on Preparing and Filing of Rate Increase Cases

The tenth annual meeting held in the Claypool Hotel at Indianapolis, Ind., Wednesday, April 24, by the Indiana Gas Association found the ranks of the organization thinned by the war, and the addresses and discussion all centered on the havoc caused in the industry by the war and the need of tremendous efforts by managers of gas utilities and by associations of all connected with the industry during the continuance of the war to insure that the business keeps its head above water.

Technical problems of the industry were handled entirely with a view determining their significance with relation to war conditions. The closer grouping of gas men into strong associations that can bring gas needs properly before regulatory commissions during the war era was declared to be absolutely essential, unless "dark days assail the industry." Constant and strenuous experimenting to cheapen costs of producing and make possible further utilization of by-products must be the keynote of the industry, if it is to weather the war, was the consensus of opinion.

The new officers of the organization were elected as follows: President, C. D. Shaul; Citizens Gas Company, Terre Haute; vice-president, W. W. Goodrich, Union Heat, Light & Power Company, Winchester; secretary, J. W. Dunbar (re-elected), United Gas & Electric Company, New Albany.

The following were elected directors for three years: R. A. Zeigler, Central Indiana Lighting Company, Anderson; J. D. Forrest, Citizens Gas Company, Indianapolis; J. C. Shepard, Public Utilities Company, Evansville. Directors for two years: H. C. Miller, Northern Indiana Gas & Electric Company, Hammond; H. J. Roach, Crawfordsville Water & Gas Company, Crawfordsville.

The address of the retiring president, E. J. Burke, of the Citizens Gas Company, Indianapolis, elicited much comment. The report of the committee appointed to discuss the address declared that war problems had been admirably handled in the address and that "these conditions can be met only by greater energy and more vigorous efforts on the part of managers of these utilities.

"We especially want to emphasize and impress upon the members what our president has so well said upon the subject of importance of gas association. Well may our president call our attention to this important subject at this time, when there is such great need of mutual helpfulness and united effort in the management of public service corporations to enable them to overcome the difficulties and adverse conditions which confront them.

"Would call your particular attention to the important suggestions in our president's address on preparedness in the filing and presenting of cases to utility commissioners for relief. With increased and ever-increasing prices of materials and supplies and equipment, the work of this association becomes more arduous and important. In this connection your committee would recommend greater co-operation on the part of our membership in the preparing and presentation of petitions for relief, to the end that more equitable and uniform rates for service rendered may be established and received by public utilities for their most necessary and useful service to the people."

This report was signed by J. C. Groble, George W. Cromer and J. C. Shepard.

A long discussion centered on the calorific standards that should be required now. J. H. Maxon, of Muncie, spoke on "Heat Value and Composition of Commercial Gases." He set out the relative composition and heat value of gases now being commercially distributed, and pointed out that Indiana's commission has maintained a standard of approximately 600 B.t.u.

"If we are to bring about the best economic conditions as to producing and supplying manufactured gas," he said, "we must have greater latitude as regards heat value of commercial gas; and wherever a gas utility can show that an advantage can be secured by supplying a gas of lower heat value than the present standard, that utility must be allowed to make such adjustment.

"The major part of the present and future supply of manufactured gas in this State—and, in fact, throughout the country—must be secured from the carbonization of bituminous coal. The coal gas plant, however, is not flexible as to output, and the enormous increase

in demand and the great fluctuation of demand make the consideration of flexible methods of production imperative.

"Waste heat from ovens and benches for producing steam to be used with coke to produce 'blue gas,' and the mixing of the 'blue gas' with the coal gas, is a plan of operation offering many possibilities. The use of bituminous coal in water gas generators in place of coke or anthracite also is worthy of careful investigation.

"The growing demand for manufactured gas to be used in industrial heat application offers vast possibilities to the manufacturer. Distribution of industrial gas of a different quality than that served for domestic use, and by means of separate systems of mains, is in immediate prospect. The fallacy of attempting to furnish manufactured gas for the general heating of houses and buildings has become fully apparent.

"No attempt will be made by the writer to present the technical side of this subject. It is apparent that before we can do much toward bringing into effect any material changes in character of gas which we supply, we must bring the public mind and the mind of the public officials in whose hands now rests the power of regulation to see that any changes we propose are mutually advantageous to the public and gas utility."

Mr. Maxon then read the recent resolutions of the Chamber of Commerce of the United States urging that closest scrutiny be given all measures tending toward further governmental control of utility properties, unless it were clearly demonstrated that war emergencies made them vitally necessary. The resolutions further pointed out that it is particularly essential to keep public utilities in America at the point of highest efficiency during the period of the war, and called on State and local authorities to give sympathetic and courageous hearing to the relief actions forced on utilities by the onerous burdens of the war era.

"Let us seek, as gas utility operators, to co-operate with each other and with all other utilities in the hope that by such co-operation we may quickly secure the increases in charges that we must have if we are to maintain service, and also secure full rights to adopt any processes and operating procedure which we can show will produce better general results than does our present practice."

Discussion of Mr. Maxon's paper brought out many interesting points, among them being statements that fair tests on thousands of lights had developed that reduction of B.t.u. had created an effect on the consumers' bills that was very negligible. Mr. Maxon also discussed various possibilities, such as the use of bituminous coal in water-gas generators to bring coal-gas plants to a flexible send-out condition.

"It will not be a practical thing in our time, nor in our children's time," he said, "to attempt to do a general heating of buildings with gas. The demand is too fluctuating and capital will not invest in such a scheme. Any gas company that starts to do this in any large way will face bankruptcy."

Mr. Maxon also held that there should be no rigid regulation of B.t.u. in gas in a district as large as a State, but that the regulation heat unit must be based on the conditions in each community.

A committee fixed the place of the next meeting at Indianapolis, and left the decision as to time up to the directors.

A paper written by C. D. Shaul, of Terre Haute, the new president of the organization, who was unable to attend the meeting, was read. The subject was "Cracking Oil in Coal-Gas Bench and Removing Light Oil from the Gas—Worked Out as War Emergency." Mr. Shaul discussed experiments of this type carried out successfully in the Terre Haute plant. Discussion brought out the general belief that since the marine use of oil probably would keep oil gas more valuable than any form of coal or coke gas, the need for such transition, other than to stabilize a gas company's output, apparently is not apparent.

Although it has been the custom in the past years for the association to hold two-day meetings annually and to close with a magnificent banquet, the war conditions this year modified the rule and a one-day meeting was held. It was concluded with a very informal dinner at the Claypool Hotel, where informal talks on gas problems were made.

The new members elected by the association were: E. E. Price, superintendent of the Gary (Ind.) Heat, Light & Water Company; C. H. Blanchard, Indianapolis; F. A. C. Stacey, representing the Stacey Manufacturing Company; J. Sendak, Hammond, Ind.; T. J. Kelly, superintendent of manufacturing, Northern Indiana Gas & Electric Company, Fort Wayne; J. F. Hildebrant, general manager of the Brazil (Ind.) Gas Company; Irwin Rawson, of the Russell Engineering Company, St. Louis, Mo.

At the morning meeting of the association regret was expressed over the inability of J. D. Forrest, general manager of the Citizens Gas Company, Indianapolis, to read his scheduled paper on "War Conditions Affecting the Gas Industry."

Conditions affecting Mr. Forrest's own company have taken him to Washington much of the time during the past few weeks, and Wednesday he was appearing before the Indiana Public Service Commission in behalf of his company's petition for rate increase.

Many routine matters were handled at the meeting of the association. A motion was unanimously adopted placing the Indiana association on record as favoring the amalgamation of the American Gas Institute and the National Commercial Gas Association, and the secretary was instructed to forward the news of the action to New York.

This action was taken following the receipt of a letter from the amalgamation committee of the two organizations signed by P. S. Young, chairman, and J. B. Klumpp, secretary. The plan proposed in the letter is to hold a special meeting of the two organizations at the Engineering Societies Building, New York, June 6, for the purpose of organizing the American Gas Association, the membership for which will start off with combined membership of the American Gas Institute and the National Commercial Gas Association.

The report of the executive committee of the Indiana association was read and adopted at the morning meeting. In brief, it told of the developments in the surcharge and reduction of heat unit petitions that were brought before the Public Service Commission of Indiana last year, and which were reported at that time in the AMERICAN GAS ENGINEERING JOURNAL. Both petitions have been called by the gas association, the heat unit petition now awaiting action by the Bureau of Standards at Washington and the surcharge petition having been segregated among any

of the individual companies desiring relief, by suggestion of the commission. The association's records let it be known that the organization stands ready to assist to the fullest any individual company which may need temporary rate relief.

At the meeting of the directors of the Indiana association, held at the Claypool Hotel Tuesday night, it was resolved to remit dues in the association of those members "who have gone to the front to fight the country's battles," and to take other laudatory steps in their behalf. These members follow:

O. F. Abrahamson, B. K. Kurb, Ray Gideon, Carl Owlstadt, C. G. Osborn, Wayne Stacey and A. H. White.

The nominating committee was appointed by retiring President Burke as follows: F. B. Tracey, Muncie; Thomas Donahue, Lafayette; George Neal, Hammond; H. J. Roach, Crawfordsville and V. V. Smith, Indianapolis.

The directors present at the meeting included President E. J. Burke; S. E. Mulholland, Fort Wayne; J. H. Maxon; W. H. Wright, Indianapolis; R. A. Zeigler; J. C. Shepard, Evansville, and J. W. Dunbar.

Many representatives of gas appliance companies were in attendance at the meeting, and some had displays of their wares in the rooms surrounding the Claypool assembly room, where the meetings were held.

C. D. Shaul arrived in Indianapolis in time to attend the annual dinner of the Indiana Gas Association, of which he was elected president at the afternoon meeting. Dr. Shaul had a word of encouragement for those at the dinner. He said that he firmly believed the war will bring out the greatest development in the gas industry that ever has been witnessed.

"The scarcity of fuels and the enormous demand on gas companies for manufacturing fuel are making it imperatively necessary for the gas industry to seek new channels of economical production, and to make researches into the question of additional by-products with giant strides," he said. "Enormous wastes have existed in the use of gas coals, oil, etc., and this wastage must now be stopped. In two years more the gas industry will see a development that will surprise us all. It already has started. The industry is about to be revolutionized. Things are happening to-day in the industry that we would not have believed before this war came on."

Retiring President of Indiana Gas Association

E. J. BURKE

E. J. Burke Finishes Term as President of Indiana Gas Association

E. J. Burke, the retiring president of the Indiana Gas Association, has made a life study of the gas business, having started his career as a bookkeeper and collector fifteen years ago in Ottawa, Ill. He was at one time manager of the Marquette Gas Light Company, of Marquette, Mich., during which time he built up the efficiency of the organization, remodeled the plant and extended its main system extensively.

In 1908 he became associated with the United Gas Improvement Company in Kansas City. While there he served in both the engineering and commercial departments of the Kansas City Gas Company until 1910, when he was appointed commercial manager of the Citizens Gas Company, of Indianapolis, Ind., which position he still holds. Mr. Burke is an active member of the National Commercial Gas Association and various local organizations in Indianapolis.

THE MUSKOGEE GAS & ELECTRIC COMPANY has declared the regular quarterly dividend of 1¾ per cent on the preferred stock, payable March 15 to stockholders of record Feb. 28.

THE COLUMBIA GAS & ELECTRIC COMPANY in March reported a surplus after charges of $332,502, or $42,455 less than in March, 1916. Gross earnings increased $18,155.

Utilizing Local Coals in Illinois

The recent convention of the Illinois Gas Association, though confined to one day rather than the usual two or three, developed so many discussions on vital gas topics that the members went away with the expressed feeling that it was probably the most beneficial session they had ever attended.

It is perhaps needless to say that fuel was one of the most favored subjects of discussion. In view of the increasing difficulty of obtaining Eastern coal gas companies generally throughout Illinois have taken seriously to the problem of coking local coals.

The results and conclusions obtained by F. K. Ovitz, of the United States Bureau of Mines, from experiments in the carbonization of Illinois coals in inclined gas retorts were summarized before the convention by E. H. Taylor, of the Bureau of Mines Committee, as follows, reading from Mr. Ovitz's report:

"Illinois coal mixed with Kentucky coal before charging yields better coke than Illinois coal alone. The coke has a more uniform cell structure, is denser, more homogeneous and stronger.

"If all the retorts are charged with the same mixture, uniform operating conditions can be maintained to insure proper carbonization of all the charges. If, however, the coals are used unmixed, the charges of Illinois coal require either a higher temperature or a longer period of carbonization than the charges of Kentucky coal.

"Coke from Illinois coal alone contained more ash and had more tendency to form clinker than coke from a mixture of Illinois coal and Kentucky coal. The Kentucky coal had a low ash content, and the ash had a high softening temperature; consequently the ash content of the coke from the mixture was decreased, and the softening temperature of the ash was raised.

"The yield of coke from mixtures was larger than from Illinois coal alone, and increased as the percentage of Kentucky coal was increased.

"The amount of breeze in the coke made from unmixed Illinois coal was greater than in coke from mixtures. The amount of breeze from mixtures decreased as the amount of Kentucky coal in the mixture was increased.

"Mixtures gave higher gas yields

and consequently enabled greater production of gas with a given equipment than could be obtained from Illinois coal alone.

"There is a considerable supply of Illinois coal with a sulphur content low enough to permit its use for gas making without operating trouble from sulphur.

"The more general use of Illinois coal in gas plants deserves careful consideration from gas manufacturers. At many plants in the Central West the cost of producing the gas can be considerably reduced by using either Illinois coal alone or by mixing with it another coal."

C. D. Shaul Elected President of Indiana Gas Association

C. D. Shaul, the new president of the Indiana Gas Association, was born at Pendleton, in Madison County, Ind. He attended Indiana University at Bloomington and graduated from there in the class of 1902. "He was ashamed to go home from college," he said, "without a job, so he took about the first one that presented itself."

Through F. W. Freese, of Fort Wayne, a charter member of the Indiana Gas Association, he became connected with the Kerr-Murray Manufacturing Company, of Fort Wayne, and assisted in the building of gas holders, gas plants and parts of gas systems during the years 1902-3. He was superintendent of the Houston Gas Company, at Houston, Tex., from 1903 to 1913, then became manager of the Altoona Gas Light & Fuel Company at Altoona, Pa., until 1914, after which he took the position of general manager of the Citizens Gas & Fuel Company, Terre Haute, Ind., which he now holds.

Suggestions Advanced at Recent Conference Associations

After a conference between John Skelton Williams, Comptroller of the Currency, and a joint committee from the American Electric Railway Association, the National Electric Light Association, the American Gas Institute and the National Commercial Gas Association, the following suggestions regarding proper relief for the utility situation were made:

1. Rates must be increased sufficiently to absorb the increased cost of producing the service.

2. The utilities must be relieved during the period of the war of all non-essential and unproductive requirements, such as paving, placing of wires under ground, duplication and unnecessary extensions of service.

3. Assistance must be provided to enable the companies to finance the unavoidable extensions of service made necessary by the nation's war program.

Massachusetts Gas Report

The fiscal year havings been changed to end Dec. 31 instead of June 30, the Massachusetts Gas Companies issue a report for the six months ended Dec. 31, 1917, which compares as below with the fiscal years ended June 30, 1917, and 1916:

	Six Mos. to Dec. 31, '17	Year to June 30, '17	Year to June 30, '16
Interest on bonds, notes, etc.	$47,371	$312,383	$351,597
Dividends received	1,654,371	3,469,457	2,581,701
Profit on sale of securities	892	2,490	5,623
Total income	$1,702,634	$3,784,330	$2,902,921
General expenses	138,281	139,695	95,084
Interest on bonds and notes	206,085	414,902	419,487
Preferred dividends	500,000	1,000,000	1,000,000
Reserve for depreciation of securities	892	2,490	5,623
Red Cross dividend	.....	125,000	.....
Surplus	$857,376	$2,102,242	$1,382,727
Undivided earnings of subsidiaries	194,260	342,596	277,440
Total earnings	$1,051,636	$2,444,838	$1,660,167
Common dividends	875,000	1,250,000	1,250,000
Balance	$176,636	$1,194,838	$410,167

In this report President Richards says in part: The marked increases in costs of manufacture and distribution of gas has obliged all four of our gas companies to seek relief through an increase in the price of gas to consumers. The Boston Consolidated Gas Company's net addition in street mains for the six months ended Dec. 31, 1917, was 1 mile, 3,330 ft. The total output of gas to consumers was 3,035,283,000 cu. ft., an increase of 8.52 per cent compared with the corresponding period the previous year.

Considering the adverse conditions, the net results of the Everett plant of the New England Fuel & Transportation Company for the six months were reasonably satisfactory. The shortage of coal at the loading piers, labor conditions and the unusually severe winter causing blocking ice all along the coast, frozen coal and delays to vessels, seriously interfered with the movement of the New England Fuel & Transportation Company's fleet of steamers, tugs and barges. Since July 1, 1917, the Government has requisitioned all the American-owned steamers of over 2,500 tons dead weight. The six steamers of the New England Fuel & Transportation Company, up to March 1, 1918, had been left in the coal trade, being operated by this company under charter from the Shipping Board. On March 9, 1918, the Shipping Board took the steamer Newton for Government service.

The output for the six months of the Federal mine was 272,540 tons, compared with 313,908 tons the same period the preceding year. Labor conditions and shortage of cars and motive power were the cause of this decrease. For the six months ended Dec. 31, 1917, the output of the J. B. B. Coal Company, 60 per cent of the stock of which is owned by the New England Fuel & Transportation Company, was 121,316 gross tons, compared with 167,343 gross tons the same period the previous year.

Mantles and Burners to be Supplied When Toluol Is Extracted

One mantle and burner will be supplied to every consumer of gas in Minneapolis who uses open flame burners when the work of extracting toluol from the gas at the plant of the Minneapolis Gas Light Company commences, it was announced recently by M. R. Maltbie, ordnance expert for the Government, in order that the lighting capacity of the gas may not be lowered.

The work will start as soon as a shipment of necessary ingredients is received there.

Supplemental Petition on B.t.u. Standard of Savannah Company Denied

An order has been handed down by the railroad commission declining to grant the petition of the Savannah (Ga.) Gas Company asking for permission to furnish gas of a lower standard than that required in the original order issued Jan. 25.

Under the new decision of the railroad commission the gas company shall show an average monthly minimum of 575 B.t.u. Since the issuance of the original order the gas company has contended that during the present conditions it could maintain an average of 565 B.t.u. City Attorney R. J. Travis, who has handled the matter for the city, did not agree with the gas company in this construction of the order.

Therefore, the gas company filed a supplemental petition in which it asked permission to furnish an average minimum of 565 B.t.u. It was this petition which the commission acted on in declining to modify its original order.

350 Barrels of Oil from New Well First Day

A new well shot by the United Fuel Gas Company in its Sunday Creek tract, 15 miles south of Charleston, W. Va., is reported to have produced 350 barrels of oil for the first twenty-four hours.

Louisville Gas Notes Now Ready

The Guaranty Trust Company, of New York, through its trust department, will, on and after April 18, be prepared to deliver the definite Louisville Gas & Electric Company two and a half year, bearing 7 per cent, gold notes, due Sept. 1, 1920, upon surrender of the outstanding interim receipts.

New Rates for Fitchburg Effective June 1

The price of gas will be increased 15 cents per 1,000 ft., beginning June 1, as announced by the Fitchburg (Mass.) Gas & Electric Light Company.

Gas is now $1.10 per 1,000 ft., with a prompt payment discount of 10 cents per 1,000. The new price will be $1.25 per 1,000 for the first 25,000 ft., $1.10 for the next 25,000 and $1 for all over 50,000.

Waukegan Company to Get Rehearing on Rate Increase

Official notification reached Waukegan, Ill., recently that the Illinois Public Utilities Commission, in conference April 9 at its Chicago office, granted the petition of the North Shore Gas Company for a rehearing regarding its proposed rate advance.

Personal Property of Rapid City Gas Plant Sold

The personal property of the Rapid City (S. D.) Gas Light Company was sold at sheriff's sale April 11 to satisfy delinquent taxes, and was bid in by A. C. Hunt as trustee.

Bidding was not particularly spirited and the purchase price was $1,000. The back personal taxes on the property amounted to something over $1,300.

This includes a title to the office fixtures and the mains of the company. The plant of the company was sold at the scavenger tax sale of real estate last fall and was purchased for $5,000.

It is understood that a new company is to be formed to take over the plant and that it will be made more extensive than it is at present. No definite announcements have as yet been made regarding this.

Increased Rate Requested by Moline Company

Ruling upon the application of the Peoples Power Company for an increase in the gas rate in Rock Island, Moline, East Moline and Silvis, Ill., is expected shortly. Representatives of the municipal governments will be present on that date. The company is asking for a flat rate of $1 per 1,000 cu. ft.

Higher Rate Asked for Quincy

The Quincy (Ill.) Gas, Electric & Heating Company has filed with the public utilities commission a petition asking permission to suspend its present gas rates and increase the net rates 5 cents per 1,000 cu. ft. The new schedule proposed follows:

For the first 2,000 cu. ft. per month, $1.10 gross per 1,000 cu. ft.; for the next 3,000 cu. ft., $1.05 gross; for the next 5,000 cu. ft., $1 gross; for the next 10,000 cu. ft., 95 cents gross, and for the next 20,000 cu. ft., 90 cents gross. The same discount of 10 cents per 1,000 for payment within ten days will hold on the new schedule, making the advance only 5 cents per 1,000 cu. ft. net, explained Manager Channon.

The prepayment rate of $1 will be $1.10, new schedule.

Charlotte Company Asks Permission to Increase Rates

Inclosed in the envelope with the monthly gas bills sent out by the Southern Public Utilities Company, Charlotte, N. C., were letters informing customers that the company has applied to the North Carolina Corporation Commission for permission to increase the rates of gas approximately 15 per cent, effective this month.

Two West Virginia Plants to be Sold

In the United States Court Judge Dayton ordered the sale of the plants of the Martinsburg (W. Va.) Gas Company and the Charleston, (W. Va.) Gas Company under bankruptcy proceedings, the report of the commissioner showing that neither could pay its debts out of the profits within five years. Col. Stuart W. Walker, of Martinsburg, was appointed commissioner to sell the plants, which are estimated to be worth more than $250,000. Both plants were declared insolvent several months ago.

Illinois Company Given Permission to Lower Quality of Gas

Gas users of northern Illinois served by the Northern Illinois Public Service Company will henceforth be supplied with an inferior grade of gas.

The Illinois Public Utilities Commission recently granted the company permission to reduce the quality of its gas.

The company serves consumers in Cook, Kankakee and Streator Counties.

Marlboro - Hudson Company Wants Authority to Issue Bonds

The Marlboro-Hudson Gas Company has petitioned the Massachusetts Board of Gas and Electric Light Commissioners for approval of an issue of additional capital stock of

the par value of $150,000, to pay for extensions of its plant and property.

Rate Increase for Mt. Clemens

Attorney O. C. Lungerhausen, appearing as counsel for the Mount Clemens (Mich.) Gas Light Company, made a plea for an increase in rates until conditions again become normal before the members of the city council at its recent meeting. He stated that under the franchise which was granted the company twenty years ago, allowing the company to charge $1.15 per 1,000 cu. ft. of gas gross, and $1 net, the company was at the present time not only losing money on their investment, but was also forced to default payment on some bonds. He asked that an increase of 20 cents per 1,000 cu. ft. of gas be allowed. The council unanimously passed the grant, making gas prices immediately $1.35 a 1,000 gross or $1.20 per 1,000 if bill is paid before the fifteenth of the month.

Property Value of Louisville Company Increased

An increase in the assessed valuation of the tangible property of the Louisville (Ky.) Gas & Electric Company was made by the Jefferson County board of tax supervisors recently. The valuation was increased from $2,526,563 to $4,000,000.

Petition Filed By Plattsburg Company for Increase

The Plattsburg (N. Y.) Gas & Electric Company has filed with the Public Service Commission, Second District, a revised tariff schedule, effective May 1, when the company proposes to change the rate for gas from $1.40 to $1.50 per 1,000 cu. ft.

Increase Asked By El Paso Company

Increased cost of operation has forced the El Paso (Tex.) Gas Company to ask the city council to allow it to increase the cost to its patrons in the form of a "service charge" of 35 cents a month.

The rate for gas consumed will remain the same as at present—$1.50 per 1,000 cu. ft., and the discount of 20 cents per thousand on bills paid before the tenth of the month will remain the same.

Cincinnati Company Wants Contract for Street Lighting Delayed

On the ground that lighting of the city's streets is a necessity, Mayor Galvin and city officials will oppose efforts of the Union Gas & Electric Company, Cincinnati, Ohio, to postpone until after the war the construction of the boulevard lighting system.

A letter from W. W. Freeman, president of the company, to Service Director Hornberger requested the city to postpone the work. He pleaded war conditions, and cited the fact that the Government opposes any but necessary improvements.

Increase Granted Lawrence Company

Despite lively opposition on the part of local labor interests and several prominent individuals the Gas and Electric Light Commission of Massachusetts handed down a decision in favor of the Lawrence (Mass.) Gas Company, authorizing an increase in gas rates from 85 cents to 95 cents per 1,000 cu. ft.

Attleboro Consumers to Pay 15 Cents More for Gas

The State board of gas and Electric light commissioners has allowed the petition of the Attleboro (Mass.) Gas Light Company for an increase in the net price from $1 to $1.15, dating April 1.

Increase Petition Filed by Burlington Company

The Citizens Gas Company has filed application with the railroad rate commission for authority to increase the rate to consumers in Burlington, Wis. The present rate is $1.60 per 1,000, with a discount of 10 cents per 1,000 for prompt payment. The commission will hold a hearing on the matter at Madison Thursday, May 2.

Greenfield Company Increases Rates

There will be an increase of 15 per cent in the price of gas, affecting Greenfield and Turners Falls, to take effect during the month of May for gas consumed during said month and will appear on bills rendered June 1. This decision was arrived at by the board of directors of the Greenfield (Mass.) Gas Light Company, owing to the increase cost of manufacture, there being a number of items included in this increase, the ones of greatest importance being the increase in the price of coal and oil used in the manufacture of gas.

Company Seeks Increase for Council Bluffs

The Citizens Gas & Electric Company, of Council Bluffs, Iowa, has been operating at a loss since the beginning of 1917, and unless it is permitted to raise rates on gas, will ultimately become insolvent, according to Emmet Tinley, counsel for the company, who requested the council to arrange for a special hearing on the matter.

According to the original grant of the city to the gas company, the rate is fixed at $1.45 per 1,000 cu. ft. This has since been reduced, and the present rate is $1.25 per 1,000 cu. ft., with 15 cents off for prompt payment.

Higher Rate to be Charged by New Albany Company

Permission has been given by the Indiana Public Service Commission for the United Gas & Electric Company to increase the rates on gas in New Albany, Jeffersonville, Port Fulton and Ohio Falls, from $1.10 to $1.30 per 1,000 ft. The company also asked to be given permission to charge 50 cents per month meter rent, this to include gas burned up to that amount. The increase is granted with the proviso the company install a pressure gauge to show that there is a regular flow at all times, there having been much complaint as to irregularity.

Maryland Rate Case Now in Litigation

Although the West Virginia & Maryland Gas Company, Westernport, Md., has put into effect its new schedule of rates to consumers, and the public is advised to pay the increase, the rights of the company in this connection will not be permanently in effect until after the courts of the State have decided which tribunal has the right to conduct an investigation and determine if the increase in rates is justified.

The 40-cent gross rate is not per-

manently in effect, as the protest against the increase is now in litigation, and if the municipalities are successful in having the rates refused after investigation, the excess money paid to the gas company will be refunded to the consumer.

Peoples Company Acquaints Consumers with Gas Problems

The Peoples Gas Light & Coke Company, of Chicago, is continuing the practice of acquainting its patrons with the problems confronting gas companies by means of riders attached to the monthly bills. The current statement received by every gas consumer in Chicago bears a flyer which is headed thus:

PRESIDENT WILSON SPEAKS

It then quotes to quite an extent the letter sent by Secretary of the Treasury McAdoo to President Wilson on how public utility companies are being crushed between mounting costs on one side and stationary rates on the other. This is followed by an extract from President Wilson's reply to Mr. McAdoo.

Having shown the consumer how the head of the nation views the situation the gas company closes the rider with the following statement: "This company's petition to the authorities for a readjustment of gas rates asks for nothing more than what Secretary McAdoo and President Wilson recommend, namely: Fair and just recognition of wartime conditions."

Ft. Collins Company Granted Increase

The city council recently passed on first reading the ordinance which grants an increase in the rates for gas as requested by the Poudre Valley Gas Company, Fort Collins, Col.

The old rate was $1.50 for illuminating gas and $1 per 1,000 for gas to be used for fuel and power.

The new rates provide for the following: First 10,000 cu. ft., $1.25 net per 1,000; second 10,000 cu. ft., $1.15 net; third 10,000 cu. ft., $1.05 net; over 30,000 cu. ft., 90 cents net. Ten cents extra is charged per 1,000 where bills are not paid by the tenth of each month.

A minimum charge is made per month for service. This is 50 cents, 75 cents or $1, according to the service. No charge is made for prepayment meters.

Chicago Company Seeks Uniform Rate for Service Pipes

The Peoples Gas Light & Coke Company, of Chicago, has petitioned the Public Utilities Commission of Illinois for authority to put into effect a uniform rule as to service pipes.

Rate Increase Asked for Canon City

The Canon (Col.) Gas Company has asked permission to increase its rates to $1.65 gross or $1.55 net per 1,000 cu. ft. for all gas consumed.

Haverhill Company Granted Increased Rate

The gas and electric light commission has decided to allow the Haverhill (Mass.) Gas Light Company an increase of 10 cents in its price of gas. The new price is 90 cents a 1,000 ft.; the company asked for 95 cents.

Rate Increase Asked by Marlboro-Hudson Company

The Marlboro-Hudson Gas Company, Marlboro, Mass., has filed a petition with the State gas and electric light commission for a revision of the order of the commission dated July 9, 1915, relative to the maximum net price of gas. The gas supplied by the company is purchased from the West Boston Gas Company.

New Railroad Station to Have Gas Supply

In compliance with the recent request of the contractors who are erecting the new terminal on West Broad Street, Richmond, Va., the superintendent of the Richmond City Gas Work was recently instructed by the administration board to extend the gas mains to the property of the Richmond Terminal Company, so as to furnish the buildings of the new passenger station with the necessary supply of gas.

THE WASHINGTON GAS LIGHT COMPANY recently announced that a dividend of 90 cents per share would be paid May 1 to stockholders of record April 15.

Hortonville Plant May be Sold Soon

At the next meeting of the stockholders of the Hortonville (Wis.) Light, Heat & Power Company the matter of an offer which has been made to dispose of the plant will be taken up.

Increased Rates for Hollister, Cal.

The State railroad commission has fixed the following schedule for Hollister, Cal., in acting upon the recent application of the Coast Counties Gas & Electric Company for an increase in gas rates:

	Gross	Net
First 500 cu. ft. or less	$1.10	$1.00
Next 2,500 cu. ft.	1.70	1.60
Next 4,000 cu. ft.	1.50	1.40
Next 8,000 cu. ft.	1.20	1.20
Next 10,000 cu. ft.	1.00	1.00
Over 25,000 cu. ft.	0.90	0.90

The net rate is effective if the bill is paid at the office on or before the tenth day of the month next succeeding that for which the bill is rendered. If bill is not paid on or before the tenth day of the month, the gross charge is effective.

Increased Rate Sought for Plymouth

The Massachusetts Gas and Electric Commission held a hearing in the county commissioner's room in the Court House recently relative to the proposition to advance the price of gas to consumers in Plymouth, Mass. Evidence was introduced by the Plymouth Gas Light Company that by reason of the increased cost of supplies and labor, the income and expense account made an unsatisfactory showing, and the company was doing business at a loss.

Baltimore Employees Get Wage Increase

Herbert A. Wagner, president of the Consolidated Gas, Electric Light & Power Company, of Baltimore, sent notices to the heads of the departments April 10 of a 10 per cent increase in the pay of the employees, to become effective at once. The company took this action in view of the high cost of living and because of the greater expense which the employees have to meet.

The increase affects those who receive their pay daily, weekly and biweekly, and includes practically 2,500 of the working force, taking in practically all except the heads of departments and those who work on monthly or yearly salaries. It will mean an additional outlay of approximately $250,000 a year to the company.

Scranton Company Demands Bills to be Paid Within Ten Days

Following its action taken recently in increasing rates generally and the charge to domestic consumers from 95 cents to $1.15 per 1,000 cu. ft., the Scranton (Pa.) Gas & Water Company is now sending out notices to its customers stating that hereafter bills must be paid within ten days of receipt of notice, else the service may be discontinued. The notices are in printed form and dated as of April 5, 1918.

The company complains that the past policy of allowing sixty to ninety days for payment of gas bills has resulted in so many abuses that it is obliged to take this action to put a stop to the increasing losses it has sustained. The bills will now be rendered as payable on the fifteenth of the month in which they are rendered, and must be paid by the twenty-fifth of the same month.

Increased Rate for Staunton

On and after April 20 gas furnished by the Staunton (Va.) Gas Company will be sold at an increased price of $1.50 per 1,000 cu. ft. This is a 25-cent per 1,000 increase, which Charles S. Hunter, receiver for the company, states is an absolute necessity.

Rate Increase Requested by Atlanta Company

An increase in the rates for illuminating and fuel gas of approximately 33 1/3 per cent is asked by the Atlanta (Ga.) Gas Light Company in a petition filed recently with the State railroad commission. This action follows indications previously made by a committee of stockholders who, in recent advertisements, have outlined the company's intentions.

Lakeland Citizens to Vote on Proposed Municipal Plant

Citizens of Lakeland, Fla., will vote on May 14 on a proposed amendment to the city charter, which provides for the issuance of $200,000 bonds for the purchase and maintenance of a gas plant.

The only gas plant in the city belongs to the Lakeland Gas Company, which was organized ten years ago as a branch of the Tampa Gas Company. The granting of a franchise at that time met with some opposition from those who hoped that the city would eventually be able to erect its own gas plant.

Dallas Company Asks for Allowance of Franchise Expense

The Dallas (Tex.) Gas Company has filed an application with the city for an allowance on its capitalization of $41,596.53 for expenses incurred in securing its recent franchise.

Uniform Service Charge Considered at New Hampshire

A conference of representatives with New Hampshire gas companies was held in the general committee room at the State House, by Commissioner Worthen, of the public service board. The meeting was called to work out some uniform method of fixing rates by all of the companies, at the same time taking into consideration local conditions. There was a discussion of the service charge, Commissioner Worthen going on record as heartily in favor of such a charge, thus reiterating the opinion expressed by Chairman Niles, of the commission, several weeks ago, when the Concord service charge was taken up at a public hearing.

Professor Worthen said the commission was still of the same mind, and Mr. Seybold, of the Portsmouth Gas Company, declared he was a firm believer in the service charge, announcing that a charge of 50 cents a month is made in Portsmouth. The Concord charge is 25 cents per month per meter. Mr. Seybold said the situation confronting the gas companies of the State calls for heroic action, and added that while possibly 125 meters were removed since the service charge was inaugurated in June, many of these had had meters replaced and were now using the gas. This had come about through a campaign of education, as a result of which the consumers realized the justice of the charge.

Wisconsin Company To Begin Gas Making at New Plant about June 15

The making of illuminating and fuel gas at the Eastern Wisconsin Railway & Lighting Company's new plant on West Johnson Street, Fond du Lac, Wis., will start, it is expected, about the middle of June or the first of July.

Must Continue To Make Extensions Without Charge

The Quincy (Ill.) Gas & Electric Company will be obliged to make extensions of gas mains to private consumers without charge as heretofore, according to a ruling filed recently by the Illinois Public Utilities Commission. The Quincy company joined with other utility companies of the State in asking that this requirement be annulled.

Societies and Associations

THE SOUTHWESTERN ELECTRICAL & GAS ASSOCIATION held the annual convention at the Hotel Galvez, Galveston, Tex., April 15 and 16. The following program was carried out: The meeting was opened at 10 a. m., April 15, by an address of welcome by Mayor I. H. Kempner. Response by W. B. Head, vice-president Texas Power & Light Company. President's address, H. C. Morris, vice-president Dallas Gas Company; appointment of committee on president's address; nomination and election of nomination committee; secretary's report on membership; secretary's report on association office; address, 'War Savings, the Solution of Our National Problem," Judge Edward F. Harris; appointment of temporary committees. The Street and Interurban Railway Section session was held at 2 p. m. that afternoon. The Gas Section session was held at 2 p. m. in the Gold Room in the afternoon. F. D. Murphy, general manager Houston Gas & Fuel

Company, was chairman. "The Commercial End of the Gas Business," by H. E. Danner, commercial manager Houston Gas & Fuel Company; "The Manufacture of Balloon Gas," by F. L. Weisser, superintendent gas department San Antonio Public Service Company; address, "What Will Be the Next Turn in the Gas Business?" by the chairman; question box and discussions; new questions brought in by members; election of section chairman. The Light and Power, general and business sessions were held on Tuesday.

THE IOWA DISTRICT GAS ASSOCIATION officers and councils have decided to hold the 1918 convention at the Chamberlain Hotel, in Des Moines, Iowa, May 28 and 29. Program of this convention will be published later.

Personal Notes

THE PACIFIC GAS & ELECTRIC COMPANY, at the annual meeting of the stockholders held April 9, re-elected the following directors: Frank B. Anderson, Henry E. Bothin, John A. Britton, William H. Crocker, Frank G. Drum, John S. Drum, F. T. Elsey, D. H. Foote, A. F. Hockenbeamer, Norman B. Livermore, John D. McKee, John A. McCandless, C. O. G. Miller, W. G. Henshaw and George K. Weeks.

M. H. BRIDGES has resigned as auditor of the Pacific Gas & Electric Company.

F. D. COWARD, superintendent of the gas plants of the Southern Public Utilities Company at Greenville, S. C., was promoted to superintendent of operation in charge of the gas plants at Charlotte, N. C., succeeding J. J. Conlon. Mr. Coward came to the service of the company from Savannah, Ga., to the Charlotte plant in 1909. For two years he was assistant to Superintendent Conlin, and was transferred to Greenville in 1911, to take charge of the one plant then operated by the company. Later, a coal gas plant was built, and Mr. Coward assumed charge of both.

J. J. CONLIN, superintendent of operation of the Southern Public Utilities Company at Charlotte, has been transferred to the general office. Mr. Conlin has been in charge for the past eleven years, coming to the old Charlotte Consolidated Construction Company from Savannah, Ga., where he was associated with the United Gas Improvement Company In his new position he will be associated with General Superintendent E. F. Taylor in construction work, and will perform such other duties as may be assigned to him from the general office.

C. C. DUNLAP has resigned as manager of the Gas Light Company, of Galena, Ill., and his resignation has been officially accepted by the company, and took effect April 17. Mr. Dunlap has held the position of manager of the water works and the gas plants for ten years, he coming to Galena to take the position at the head of the water works and later, when the company purchased the gas company, Mr. Dunlap also headed this organization in Galena and managed both most efficiently until the water works was purchased by the city last year. Mr. Dunlap has taken a position with a public service company at Radford, Va., and will go to that city shortly.

GEORGE BEIL, who has been superintendent of the Gas Light Company, of Galena, Ill., for a number of years, has been officially appointed as manager, succeeding C. C. Dunlap.

J. A. GALLIGAN, manager of Pickands, Brown & Company, of Chicago, has been appointed coke administrator of Chicago by the Federal Fuel Administration. He will have charge of the apportionment and distribution of coke in the Illinois division of the administration.

WILLIAM L. KING, for ten years a valued employee of the Cambridge (Mass.) Gas Light Company, later as manager of the commercial department, recently severed his connection with the company to assume the treasureship of the Granite State Spring Water Company at Atkinson, N. H. His position has been taken by Andrew F. Pettingell, who has been in the employ of the company in another capacity for several years.

JOHN C. REED and HEVERIN S. REED have formed a partnership, to be known as J. C. Reed & Company, bankers, 200-201 Morris Building, 1421 Chestnut Street, Philadelphia, Pa. John C. Reed was formerly a partner in the firm of Starr & Reed, recently dissolved.

CHARLES E. STARR will continue in the business of investment securities and public utility properties at 1303 Morris Building, Philadelphia, Pa., the firm of Starr & Reed having dissolved.

C. L. PROCTOR, who has been new business manager of the Empire District Electric Company, with headquarters at Joplin, Mo., has been made general manager of the Danbury (Conn.) & Bethel Gas & Electric Light Company, succeeding the late Charles H. Merritt.

JOHN MCMILLAN, superintendent of the Joplin (Mo.) Gas Company, has resigned his position to accept one with another company June 1. Mr. McMillan has been with the company since last August.

GEORGE W. FULLERTON, manager of the Albion (Mich.) Gas Light Company, has been transferred to Providence, R. I. He will be succeeded by C. W. Beck, of Valparaiso, Ind.

DWIGHT K. BARTLETT, the retiring assistant manager of the Builders Iron Foundry, was recently tendered a testimonial dinner at the Turks Head Club. Both men and women employees attended the farewell party, and there were informal speeches made. W. C. Greene presented a traveling bag, the gift of those present, to Mr. Bartlett. Mr. Bartlett will become manager of the Electro Bleaching Gas Company, New York.

CORNELIUS A. MCCARTHY, who retired as treasurer of the Lawrence (Mass.) Gas Company, as was noted in the April 13 issue of the AMERICAN GAS ENGINEERING JOURNAL, was presented with a fountain pen and a purse of gold April 12 in the company office by the employees of the corporation. The presentation was made by Leroy S. Colby, superintendent of the company. He paid high tribute to Mr. McCarthy and his work while employed as cashier of the company.

JAMES C. CHAPMAN, chief engineer of the Blackstone Valley Gas & Electric Company's plant at Woonsocket, R. I., has resigned and has taken up his new duties as chief engineer at the Manville Manufacturing Company's plant in Manville. He had been employed by the Blackstone company for the past eight years. Employees of the generating departments of Stations 1 and 2 presented to him a diamond stickpin.

RALPH W. PERKINS, for three years superintendent of the gas department of the Blackstone Valley Gas & Electric Company, Woonsocket, R. I., has been made assistant manager of the Haverhill (Mass.) Gas Light Company, and assumed his new duties April 22.

FORREST N. NASON, assistant superintendent of the Blackstone Valley Gas & Electric Company, Woonsocket, R. I., succeeds R. W. Perkins as superintendent.

GUY C. ANDREWS, of the commercial department of the Blackstone Valley Gas & Electric Company, Woonsocket, R. I., has been appointed assistant superintendent of the company. He came to Woonsocket from Paducah.

WILLIAM H. MCLAIN, for several years a member of the commercial department of the Houston (Tex.) Gas & Fuel Company, has resigned in order to enter another line of business.

Watsonville Consumers Will Pay Higher Price for Gas

An increase in the Watsonville, Cal., gas rates of between 8 and 9 per cent is announced in a decision of the State railroad commission on the petition of the Coast Counties Gas & Electric Company.

The old Watsonville rate was $1.50 per 1,000 cu. ft., while the new rate will be $1.63 for amounts of between 3,000 and 4,000 cu. ft. monthly. The scale of prices for smaller and larger consumption has been accordingly altered. The new schedule of general service rates follow:

First 500 cu. ft. or less, per month, per meter, $1.10, net $1; next 2,000, per 1,000, $1.70, net $1.60; next 3,000, per 1,000, $1.50, net $1.40; next 4,000, per 1,000, $1.30, net $1.20; next 5,000, per 1,000, $1; all over 14,000, per 1,000, 90 cents.

The net rate is effective if the bill is paid on or before the tenth day of each month. The rate on meters where no gas is used is 75 cents per month.

In the case of hotels in Santa Cruz and Watsonville, where the annual guarantee is $150, the rates are fixed at 90 cents per 1,000, net 85 cents; the minimum weekly charge per meter is $7.50, but in all four towns where the annual charge in the matter of hotels, bakeries and restaurants is only $50, the charge is fixed at $1.10 per 1,000, net $1; minimum weekly charge per meter, $4, net $2.50.

Annual Report of Cities Service Shows Increased Earnings

The eight annual report of Cities Service Company for the year ended Dec. 31, 1917, strikingly reflects the important position which that corporation has attained in the petroleum industry of the United States. In the year, through its subsidiaries, the company produced 11,675,515 barrels of crude oil.

The total refinery capacity of the company at the close of the year was in excess of 33,500 barrels of crude oil daily. Through its subsidiaries the company is now a complete unit in the oil industry, producing, refining, transporting and distributing gasoline, kerosene, fuel oil and all petroleum products, with 151 distributing stations now installed, not including those in foreign countries.

A tremendous increase in earnings is the most important development of the year. This increase has been so rapid as to make a gratifying comparison with previous operations despite deductions which have been made to provide reserves for war taxes. The statements compare as follows:

	12 Mo. Ending Dec. 31, 1917	12 Mo. Ending Dec. 31, 1916	Increase	Per Cent
Gross earnings	$19,252,492.84	$10,110,342.90	$9,142,149.94	90.4
Expenses	357,229.09	239,389.70	117,839.39	49.2
Net earnings	18,895,263.75	9,870,953.20	9,024,310.55	91.4
Interest on notes and debentures	2,861.74	258,960.44	*256,098.70	*98.9
Net to stock	18,892,402.01	9,611,992.76	9,280,409.25	96.6
Dividends preferred stock	3,712,695.15	2,409,690.92	1,303,004.23	54.1
Net to common stock and reserves	$15,179,706.86	$7,202,301.84	$7,977,405.02	110.8

*Decrease.

Commission Refuses To Suspend Rule for Free Connections

The public utilities commission recently denied the petition of the Public Service Company of Northern Illinois, of Chicago, asking the suspension of the rule requiring the company to make free connections for gas customers free of charge, providing, however, that the company may require such customers to make a deposit to cover the cost of making the connections, to be ultimately returned or credited on the consumers' bills, in the meantime paying interest on the deposit.

Lighter for Washington Company

A new lighter built in Baltimore for the Washington (D. C.) Gas Light Company was delivered recently. The lighter is 85 ft. long and 28 ft. wide, and will carry 300 tons of coal. It is to be used in the transportation of the fuel from the dumps at Georgetown to the works of the gas company on the Eastern Branch.

New Rate in Effect at Charleston, S. C.

For several years Charleston consumers have been paying $1 per 1,000 cu. ft. for gas. For the period of the war the Charleston (S. C.) Consolidated Railway & Lighting Company requested city council to authorize it to charge $1.10, declaring that owing to the mounting cost of all materials the company simply could not survive at the lower price.

As amended before final passage the ordinance reads that the rate of $1.10 will be effective beginning April 1 until city council, in its discretion, decides that the time is ripe for a return to the rate of $1.

Your Country's Interests Are Your Own

BY giving up luxuries and some of the comforts and conveniences which you can deny yourself without serious hardship, you will save materials which our soldiers need, and without which they will be severely handicapped.

By investing the money you thus save in Liberty Bonds, you will still further aid the Government in buying food, arms, ammunition and supplies for our army and navy.

And the money you so invest will come back to you, with interest, at a time when you may need it far more than you do now.

Your thrift, economy and self-denial NOW will be a double help to your country in its time of greatest need, and will be the highest service that you can render yourself and those dependent on you.

Save all you can, and invest all your savings in Liberty Bonds.

LIBERTY LOAN COMMITTEE
Second Federal Reserve District
120 BROADWAY, NEW YORK

Committees Appointed for Illinois Gas Association

At a recent meeting of the board of directors of the Illinois Gas Association the following committees were appointed for the ensuing year:

Public Relations Committee—F. E. Luther, chairman; F. J. Baker, Carroll Miller, M. L. Harry and R. S. Wallace.

Nominating Committee—F. W. Bedard, chairman; E. D. V. Dickey and H. M. Smith.

Technical Committee — C. A. Schnerr, chairman; R. C. Downing and W. F. Crossley.

Entertainment Committee—C. A. Luther, chairman; H. T. Hirst and H. E. Turner.

Gas Engineering Committee—G. H. Lukes, chairman; F. E. Luther and H. H. Clark.

Bureau of Mines Committee—C. W. Bradley, chairman; F. W. Bedard, H. O. Channon, R. B. Harper, J. F. Gilchrist, M. H. Sherman and W. M. Willett.

Any member who is in doubt as to his duties on his committee can obtain information from the secretary.

Construction Notes

Plant to be Erected at Hartford for Extracting Toluol

A $100,000 plant to extract toluol from Hartford's gas supply will be erected at once near the Hartford (Conn.) City Gas Company's works, under the supervision of Government officials. It is estimated that the new plant will produce 50,000 gal. a year of toluol. Hartford's gas supply is about 2,500,000 cu. ft. a day.

THE PORTLAND (ORE.) GAS & COKE COMPANY'S report for January, 1918, shows 21 per cent increase in gross revenues, 22 per cent gain in operating expenses and 20 per cent more in net earnings, as compared with the same month of last year. For the period of twelve months the net earnings were only 2 per cent over those of the preceding period because of the fact that operating expenses increased 16 per cent while gross revenues advanced only 9 per cent. Following is the summarized report:

	Jan., 1918	12 months
Gross earnings	$137,861	$1,385,142
Operating expenses	73,852	766,605
Net earnings	$64,009	$618,537
Balance after deducting all fixed charges	$34,231	$280,440

New Franchise Granted Cadillac Company

The granting of a new franchise to the Cadillac Gas Company, of Cadillac, Mich., recently is reported by the United Light & Railways Company, of which the Cadillac Gas Company is a subsidiary.

THE CENTRAL ILLINOIS PUBLIC SERVICE COMPANY in 1917 earned a surplus after all charges of only $88,081, compared with $133,600 in 1916, although showing a slight improvement in both gross and net earnings. The income account compares:

	1917	1916
Gross earnings	$2,448,050	$2,169,648
Operating expenses, including taxes	1,576,392	1,320,555
Other income	26,338	30,060
Net earnings	897,996	879,153
Interest charges	615,496	543,758
Other deductions	.....	8,295
Preferred dividends	194,418	193,500
Surplus for year	88,081	133,600

The balance sheet for the year ended Dec. 1 compares:

ASSETS

	1917	1916
Property account	$21,238,016	$20,089,128
Securities owned	1,208	531
Sinking fund	948	1,768
Materials and supplies	173,251	167,014
Notes and accounts receivable	512,279	442,248
Cash	91,812	86,157
Prepaid ins., exp., etc	124,727	63,516
Total	$22,142,243	$20,850,363

LIABILITIES

Capital stock	$9,255,600	$9,225,000
Bonded debt	11,414,500	10,055,000
Notes payable	542,374	502,224
Accounts payable	230,439	207,405
Interest and taxes accrued	289,074	250,561
Dividends accrued	48,834	48,375
Advances from holding companies	11,000	263,222
Sundry reserves	72,792	45,040
Surplus	277,627	249,546
Total	$22,142,243	$20,850,363

Gas Plant Contemplated for Spencer

William Glenn, of Sheldon, Iowa, representing the Public Improvement Company, of Minneapolis, was in Spencer recently looking up the prospects for a gas plant there. Mr. Glenn is in charge of the gas plant at Sheldon, and he says Spencer, being a larger town, ought to have a gas plant, too. While there he called on a number of business men, and stated, when he left, that the prospects were very favorable.

W. J. Stinson, the engineer at Sheldon, was also in Spencer making a preliminary survey, and both gentlemen are agreed that Spencer ought to have a gas plant. The one at Sheldon cost about $54,000, but the Spencer plant would have to be larger.

PILGRIM OIL & GAS COMPANY, Boston, Mass. Oil and gas leases and lands; $75,000. Incorporators, Horace A. Skilton and Alan R. Campbell, of Cambridge, and Richard S. Crocker, Belmont.